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HYDROLOGIC DATA FOR EXPERIMENTAL AGRICULTURAL WATERSHEDS IN THE UNITED STATES, 1969

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UNITED STATES
DEPARTMENT OF
AGRICULTURE

MISCELLANEOUS
PUBLICATION
NUMBER 1370

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ADMINISTRATION

ABSTRACT

Burford, James B., John M. Clark, Jane L. DeLashmutt, and Ralph T. Roberts. 1979. Hydrologic data for experimental agricultural watersheds in the United States, 1969. U.S. Department of Agriculture, Miscellaneous Publication No. 1370, 602 p.

Hydrologic data from 167 agricultural watersheds for calendar year 1969 are summarized in this publication. Daily and monthly total precipitation and streamflow together with annual maximum peak discharge and maximum runoff for selected time intervals are included. Watershed descriptive information is presented. Maximum and minimum daily temperatures are given for many of the watersheds. This is the 13th publication in this series.

KEYWORDS: Hydrology data, precipitation, streamflow, air temperature, watersheds, water data, hydrology research.

**Science and Education Administration
UNITED STATES DEPARTMENT OF AGRICULTURE
In Cooperation With
State Agricultural Experiment Stations**

HYDROLOGIC DATA FOR EXPERIMENTAL AGRICULTURAL WATERSHEDS IN THE UNITED STATES, 1969

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PREFACE

This publication presents annual basic data on monthly precipitation and runoff; annual maximum discharges and volumes of runoff; daily precipitation and discharge amounts, with daily air temperature for some areas; and selected runoff events, with associated data on rainfall, land use, and antecedent conditions for agricultural watersheds where research was in progress during 1969. It is a continuation of processing and releasing hydrologic data of general interest collected cooperatively with other agencies.

Throughout the watershed studies the State agricultural experiment stations have collaborated in selecting, planning, and conducting these studies. In several studies the U.S. Geological Survey and State and local agencies, such as State water boards and highway departments of local drainage and conservation districts, have assisted in the work. The classification and correlation of soils and evaluation of other watershed characteristics in the descriptions have been based mostly on field surveys by the U.S. Soil Conservation Service.

These data were collected originally for specific research objectives, which are still in progress or have been attained. In addition, they can serve many other purposes. This publication provides information for other government agencies, university staff members, graduate students, private engineers, and others who need detailed, factual information concerning agricultural watersheds. High-quality hydrologic data such as these have historic value in addition to providing a basis for research and design and evaluation of projects and programs for conservation and development of the Nation's water resources.

Although the data on which this publication is based were collected in 1969, the findings are still valid and are used for further research on agricultural watersheds.

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The decimal system of paging is used to index the watershed data. Pages are numbered at the bottom according to location and watershed number, and the data for each watershed are given on one or more pages. For example, page 10.001-1 is location 10 (Watkinsville, Ga.), Watershed 1 (W-1 at Watkinsville), and page 1 of the data for that watershed. For convenience in finding items listed in table 3, pages are also numbered consecutively at the top.

Table 3 is a list of continuing or new watersheds by State, locality, assigned location number, and land resource area, with number of watershed units and selected runoff events reported for 1969 in this publication. Table 4 includes similar data on discontinued watersheds.

Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1969

This is the 13th publication in the series on hydrologic data by the Science and Education Administration-Agricultural Research (SEA-AR) (formerly Agricultural Research Service (ARS)). The first three are described in the following section and the others are summarized in table 1. Since the decimal paging system used (see explanation on preceding page) is consistent with that at the bottom of pages in the other 12 publications, previously published records and general descriptions can be readily found and consulted.

This publication contains selected hydrologic data for 1969 and earlier years for some watersheds. It includes data on monthly precipitation and runoff, annual maximum discharge and volume of runoff for intervals of 1, 2, 6, and 12 hours and 1, 2, and 8 days for 167 watersheds; daily precipitation for 165 watersheds; mean daily discharge for 150 watersheds; daily maximum and minimum air temperatures for 16 watersheds; and detailed information on 1 or more selected typical storm events for 143 watersheds.

Information on selected storm events includes (1) tabular data for antecedent rainfall and runoff; (2) data on rainfall intensity and runoff for the event and on accumulated depth of rainfall and runoff; (3) description of watershed conditions at the time of the selected events; and (4) plottings of runoff hydrographs and rainfall histograms.

For newly established watersheds, descriptions of watershed physical characteristics, instrumentation, graphs, maps, land management, and recommended area of application of the results are also given. Revised or updated maps of some watersheds for which data have previously been published are included.

The first 11 publications in this series re-

sulted from the cooperative efforts of several SEA-AR watershed research projects and the editing staff in Beltsville, Md. Hydrologic data were summarized, arranged according to standardized formats, recorded on preprinted data sheets, and submitted to the editing office for final review, assemblage, and publication.

A computer-oriented system has been designed and developed by the Water Data Laboratory to produce camera copy sheets for these publications. This is the second publication that has been compiled using the computerized system. Hydrologic data submitted by research projects, in digital form and recorded on computer media, are accepted by the system. The required data analyses and summaries are performed and the tables and plottings are provided within and by the system. Narrative information is incorporated into the system as upper and lower case alphameric data using computer-compatible word-processing equipment. The format of hand-compiled references (4 through 11) has been retained where practical in the computer-compiled versions of the publications.

PUBLICATIONS OF EARLIER DATA

Historical hydrologic data on the experimental agricultural watersheds, both terminated and active, have been previously summarized in three looseleaf publications (reprints in bound volumes) by the former Agricultural Research Service (now Science and Education Administration-Agricultural Research). They are described in the following summaries. Beginning with the hydrologic data for 1956 through 1969, the types of data previously published separately in these three volumes are now combined in U.S. Department of Agriculture Miscellaneous Publications 945, 994, 1070, 1164, 1194, 1216,

1226, 1262, 1330, and 1370. These miscellaneous publications are listed in table 1 as references 4-13. These reference numbers have been assigned to simplify citations to them here and in future publications. The first three looseleaf and the first eight miscellaneous publications are recorded on 16-mm microfilm. Copies can be made available for the cost of the film processing.

Reference 1.—MONTHLY PRECIPITATION AND RUNOFF FOR SMALL AGRICULTURAL WATERSHEDS IN THE UNITED STATES. Soil and Water Conservation Research Branch, 691 pages, 1957. (Includes physical descriptions and land use of 334 experimental agricultural watersheds at 60 locations in 27 States from 1923 through 1957. Many of these watersheds were discontinued before 1955.)

Reference 2.—ANNUAL MAXIMUM FLOWS FROM SMALL AGRICULTURAL WATERSHEDS IN THE UNITED STATES. Soil and Water Conservation Research Division, 330 pages, 1958. (Includes records from 322 watersheds at 59 locations in 27 States from 1923 through 1957. Many of these watersheds were discontinued before 1957.)

Reference 3.—SELECTED RUNOFF EVENTS FOR SMALL AGRICULTURAL WATERSHEDS IN THE UNITED STATES. Soil and Water Conservation Research Division, 374 pages, 1960. (Includes a sampling of 1 to 6 typical runoff events from 68 watersheds at 40 locations in 25 States from

1933 through 1959. The publication has maps of each watershed, watershed conditions for each event, including the 30-day antecedent rainfall and runoff, and tabular as well as graphic data on each storm.)

Copies of all these publications have been furnished to the Soil Conservation Service and other Federal, State, and local government agencies. They have also been distributed to State agricultural experiment stations, university libraries and engineering departments, private engineers and individuals when requested, and similar foreign institutions and individuals when requested.

Table 2 lists the watersheds for which information is given in this publication (reference 13). Other references containing information related to these watersheds, obtained prior to 1969, are also included.

Table 3 summarizes where data for each watershed can be found in this 13th publication.

Table 4 lists the watershed units where studies were discontinued in 1968.

FORM OF DATA PRESENTATION

The data in this publication are presented for each watershed in the following order: (1) Watershed description, if not previously published; (2) monthly precipitation and runoff; (3) average monthly precipitation and runoff for period of record; (4) annual maximum flows; (5) daily temperature extremes, daily

TABLE 1.—Description of references 4-13 of "Hydrologic Data for Experimental Agricultural Watersheds in the United States"

Reference	For calendar year (19—)	Miscellaneous Publication No.	Year published (19—)	Total pages	Number of watersheds for which indicated data are given				
					Monthly precipitation and runoff	Annual maximum discharge and runoff for selected time intervals	Selected runoff events	New watersheds	Daily precipitation, discharge, and/or temperature (max.-min.)
4.....	56-59	945	63	672	157	142	134	45	---
5.....	60-61	994	65	496	160	145	133	24	---
6.....	62	1070	68	447	164	155	136	13	50
7.....	63	1164	70	465	168	156	142	9	57
8.....	64	1194	71	460	163	163	143	8	57
9.....	65	1216	72	568	189	178	122	22	60
10.....	66	1226	72	399	198	185	106	11	60
11.....	67	1262	73	634	216	204	174	26	62
12.....	68	1330	76	542	174	174	116	1	174
13.....	69	1370	79	602	167	150	139	5	167

Table 2. Index to information on experimental agricultural watersheds included in this publication^{1/}

Water-shed ident. code	Study location		Water-shed name-No.	Area in acres 2/	Record Rev. (19--) B E No 3/ 4/			Index to information in reference ^{5/}												
	Town	State						01	02	03	04	05	06	07	08	09	10	11	12	13
08002	Vero Beach	FL	W-2	63,100.	55		06	01	02		04	05	06	07	08	09	10	11	12	13
08003	Vero Beach	FL	W-3	10,000.	55		06	01	02		04	05	06	07	08	09	10	11	12	13
10001	Watkinsville	GA	W-1	19.2	39		07	01	02		04	05	06	07	08				12	13
13007	Blacksburg	VA	C.C.	786.	57							05	06	07	08	09	10	11	12	13
13008	Blacksburg	VA	B.C.	893.	57						04	05	06	07	08	09	10	11	12	13
13010	Blacksburg	VA	L.W.C.	1,471.	58	74	08					05	06	07	08	09	10	11	12	13
13011	Blacksburg	VA	R.R.B.	555.	58		08					05	06	07	08	09	10	11	12	13
13015	Blacksburg	VA	C.B.	1,058.	60		08					05	06	07	08	09	10	11	12	13
16006	Klingerstown	PA	WE-38	1,773.	68														12	13
25001	McCredie	MO	S.R.W.	153.	41		07	01	02		04	05	06	07	08	09	10	11	12	13
26001	Coshocton	OH	102	1.26	37	46	06	01	02		04	05	06	07	08	09	10	11	12	13
26003	Coshocton	OH	129	2.71	38	72	06	01	02		04	05	06	07	08	09	10	11	12	13
26004	Coshocton	OH	135	2.69	38	70	06	01	02		04	05	06	07	08	09	10	11	12	13
26005	Coshocton	OH	130	1.63	38	72	06	01	02		04	05	06	07	08	09	10	11	12	13
26007	Coshocton	OH	131	2.21	38	70	06	01	02		04	05	06	07	08	09	10	11	12	13
26008	Coshocton	OH	132	0.59	48	70	06	01	02		04	05	06	07	08	09	10	11	12	13
26010	Coshocton	OH	123	1.37	39		06	01	02		04	05	06	07	08	09	10	11	12	13
26011	Coshocton	OH	115	1.61	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26012	Coshocton	OH	127	1.65	49	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26013	Coshocton	OH	109	1.69	38		06	01	02		04	05	06	07	08	09	10	11	12	13
26014	Coshocton	OH	103	0.65	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26015	Coshocton	OH	110	1.27	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26016	Coshocton	OH	113	1.45	39	73	06	01	02		04	05	06	07	08	09	10	11	12	13
26017	Coshocton	OH	118	1.96	40	73	06	01	02		04	05	06	07	08	09	10	11	12	13
26018	Coshocton	OH	111	1.18	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26019	Coshocton	OH	121	1.42	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26020	Coshocton	OH	106	1.56	39	72	06	01	02		04	05	06	07	08	09	10	11	12	13
26021	Coshocton	OH	188	2.05	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26023	Coshocton	OH	185	7.40	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26024	Coshocton	OH	187	7.20	41	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26025	Coshocton	OH	192	7.59	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26027	Coshocton	OH	169	29.0	40	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26028	Coshocton	OH	177	75.6	40	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26030	Coshocton	OH	196	303.	37		06	01	02	03	04	05	06	07	08	09	10	11	12	13
26031	Coshocton	OH	10	122.	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26032	Coshocton	OH	5	349.	40	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26033	Coshocton	OH	92	920.	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26034	Coshocton	OH	94	1,520.	39	71	06	01	02		04	05	06	07	08	09	10	11	12	13
26035	Coshocton	OH	95	2,570.	39	72	06	01	02		04	05	06	07	08	09	10	11	12	13
26036	Coshocton	OH	97	4,580.	37	71	06	01	02	03	04	05	06	07	08	09	10	11	12	13
26038	Coshocton	OH	174	52.8	60		06					05	06	07	08	09	10	11	12	13
26039	Coshocton	OH	194	187.	60		06					05	06	07	08	09	10	11	12	13
26040	Coshocton	OH	182	69.6	64	71											10	11	12	13
26041	Coshocton	OH	166	79.2	67															13
37001	Stillwater	OK	W-1	16.7	51	72	05	01	02		04	05	06	07	08	09	10	11	12	13
37002	Stillwater	OK	W-3	92.	51	72		01	02	03	04	05	06	07	08	09	10	11	12	13
37003	Stillwater	OK	W-4	206.	51	72		01	02		04	05	06	07	08	09	10	11	12	13
42002	Riesel	TX	C	579.	38		08	01	02		04	05	06	07	08	09	10	11	12	13
42003	Riesel	TX	D	1,110.	37		08	01	02	03	04	05	06	07	08	09	10	11	12	13
42004	Riesel	TX	G	4,380.	38		08	01	02		04	05	06	07	08	09	10	11	12	13
42006	Riesel	TX	W-1	176.	37		08	01	02	03	04	05	06	07	08	09	10	11	12	13
42007	Riesel	TX	W-2	130.	37		08	01	02		04	05	06	07	08	09	10	11	12	13
42008	Riesel	TX	W-6	42.3	39		08	01	02		04	05	06	07	08	09	10	11	12	13
42010	Riesel	TX	W-10	19.7	38		08	01	02		04	05	06	07	08	09	10	11	12	13
42011	Riesel	TX	Y	309.	37		08	01	02		04	05	06	07	08	09	10	11	12	13
42012	Riesel	TX	Y-2	132.	39		08	01	02		04	05	06	07	08	09	10	11	12	13
42014	Riesel	TX	Y-6	20.9	39		08	01	02		04	05	06	07	08	09	10	11	12	13

See footnotes at end of table.

Table 2. Index to information on experimental agricultural watersheds included in this publication^{1/}
- Continued.

Water-shed ident. code	Study location		Water-shed name-No.	Area in acres	Record Rev. (19--) ref.		Index to information in reference ^{5/}													
	Town	State			B	E	No.	01	02	03	04	05	06	07	08	09	10	11	12	13
42015	Riesel	TX	Y-7	40.	39	08	01	02		04	05	06	07	08	09	10	11	12	13	
42016	Riesel	TX	Y-8	20.8	39	08	01	02		04	05	06	07	08	09	10	11	12	13	
42017	Riesel	TX	Y-10	21.0	38	08	01	02		04	05	06	07	08	09	10	11	12	13	
42023	Riesel	TX	SW-11	3.23	38		01	02											13	
42024	Riesel	TX	SW-12	2.97	38	08	01	02		04	05	06	07	08	09	10	11	12	13	
42028	Riesel	TX	SW-17	2.99	39	08	01	02		04	05	06	07	08	09	10	11	12	13	
42037	Riesel	TX	Y-13	11.3	69														13	
42038	Riesel	TX	Y-14	5.6	69														13	
42039	Riesel	TX	W-12	9.9	69														13	
42040	Riesel	TX	W-13	11.3	69														13	
62001	Oxford	MS	W-4	1,580.	57	06			03	04	05	06	07	08	09	10	11	12	13	
62002	Oxford	MS	W-5	1,130.	57	06			03	04	05	06	07	08	09	10	11	12	13	
62003	Oxford	MS	W-10	5,530.	57	06			03	04	05	06	07	08	09	10	11	12	13	
62004	Oxford	MS	W-12	22,800.	57	06				04	05	06	07	08	09	10	11	12	13	
62005	Oxford	MS	W-17	32,100.	57	06				04	05	06	07	08	09	10	11	12	13	
62007	Oxford	MS	W-24	512.	57	06				04	05	06	07	08	09	10	11	12	13	
62008	Oxford	MS	W-28	1,080.	57	06				04	05	06	07	08	09	10	11	12	13	
62010	Oxford	MS	W-32	20,000.	57	06				04	05	06	07	08	09	10	11	12	13	
62011	Oxford	MS	W-34	75,000.	57	06			03	04	05	06	07	08	09	10	11	12	13	
62012	Oxford	MS	W-35	7,550.	57	06				04	05	06	07	08	09	10	11	12	13	
62017	Oxford	MS	W-17A	3,200.	57	06					05	06	07	08	09	10	11	12	13	
62018	Oxford	MS	W-35A	1,090.	57	06					05	06	07	08	09	10	11	12	13	
63001	Tombstone	AZ	W-1	36,900.	54	07				04	05	06	07	08	09	10		12	13	
63002	Tombstone	AZ	W-2	28,100.	54	07				04	05	06	07		09	10		12	13	
63003	Tombstone	AZ	W-3	2,220.	54	07				04	05	06	07		09	10	11	12	13	
63004	Tombstone	AZ	W-4	560.	54	07				04	05	06	07	08	09	10	11	12	13	
63006	Tombstone	AZ	W-6	23,500.	62								07	08	09	10		12	13	
63008	Tombstone	AZ	6308	3,830.	63										08	09	10		12	13
63011	Tombstone	AZ	6311	2,035.	63										08	09	10		12	13
63015	Tombstone	AZ	6315	5,912	65											09	10	11	12	13
64001	Santa Rosa	NM	W-1	42,880.	55						04	05	06	07	08	09	10		12	13
65002	Newell	SD	W-2	115.	58	73					04	05	06	07	08	09	10	11	12	13
65005	Newell	SD	W-5	46.	58	73					04	05	06	07	08	09	10	11	12	13
65007	Newell	SD	W-7	160.	58	73	05				04	05	06	07	08	09	10	11	12	13
65012	Newell	SD	W-12	90.	58	73	05				04	05	06	07	08	09	10	11	12	13
65013	Newell	SD	W-13	160.	58	73					04	05	06	07	08	09	10	11	12	13
65014	Newell	SD	W-14	35.	58	73	05				04	05	06	07	08	09	10	11	12	13
65015	Newell	SD	W-15	115.	58	73	05				04	05	06	07	08	09	10	11	12	13
67001	N. Danville	VT	W-1	10,610.	58						04	05	06	07	08			11	12	13
67002	N. Danville	VT	W-2	146.	58						04	05	06	07	08			11	12	13
67003	N. Danville	VT	W-3	2,067.	60							05	06	07	08			11	12	13
67004	N. Danville	VT	W-4	10,752.	60													11	12	13
67005	N. Danville	VT	W-5	27,469.	60							05	06	07	08			11	12	13
68001	Reynolds	ID	W-1	57,700.	63									07	08	09	10	11	12	13
68002	Reynolds	ID	W-2	8,990.	65											09	10	11	12	13
68003	Reynolds	ID	W-3	7,846.	66												10	11	12	13
68004	Reynolds	ID	W-4	13,453.	67													11	12	13
68011	Reynolds	ID	W-11	306.	67													11	12	13
68012	Reynolds	ID	W-12	205.	67													11	12	13
68013	Reynolds	ID	W-13	100.	66												10	11	12	13
68014	Reynolds	ID	W-14	33.	67													11	12	13
69001	Chickasha	OK	100	2,339,800.	61								06	07	08	09	10	11	12	13
69002	Chickasha	OK	200	(a)2,612,500. (b) 273,000.	61								06	07	08	09	10	11	12	13
69005	Chickasha	OK	500	(a)2,768,000. (b) 43,840.	64										08	09	10	11	12	13
69006	Chickasha	OK	600	(a)3,011,800. (b) 243,050.	63	71								07	08	09	10	11	12	13
69007	Chickasha	OK	700	(a)3,061,120. (b) 50,830.	61								06	07	08	09	10	11	12	13

Table 2. Index to information on experimental agricultural watersheds included in this publication^{1/}
- Continued.

Water-shed ident. code	Study location		Water-shed name-No.	Area in acres	Record (19--)	Rev. ref. B E No.	Index to information in reference ^{5/}													
	Town	State					01	02	03	04	05	06	07	08	09	10	11	12	13	
69008	Chickasha	OK	611	4,845.	61	74							06	07	08	09				13
69009	Chickasha	OK	612	563.	61	74							06	07	08	09	10	11	12	13
69010	Chickasha	OK	111	16,640.	61								06	07	08	09	10	11	12	13
69011	Chickasha	OK	131	25,660.	61								06	07	08	09	10	11	12	13
69012	Chickasha	OK	411	34,180.	61	74							06	07	08	09	10	11	12	13
69013	Chickasha	OK	511	38,020.	61								06	07	08	09	10	11	12	13
69014	Chickasha	OK	110	25,020.	63								07	08	09	10	11	12	13	
69015	Chickasha	OK	522	132,990.	63	73							07	08	09	10	11	12	13	
69016	Chickasha	OK	512	22,530.	63								07	08	09	10	11	12	13	
69017	Chickasha	OK	621	21,310.	63	73							07	08	09	10	11	12	13	
69018	Chickasha	OK	121	131,780.	63	74							07	08	09	10	11	12	13	
69019	Chickasha	OK	513	12,314.	65								09	10	11	12	13			
69027	Chickasha	OK	311	15,206.	67												11	12	13	
69030	Chickasha	OK	C-1	17.8	65											09	10	11	12	13
69031	Chickasha	OK	C-2	32.5	62											09	10	11	12	13
69032	Chickasha	OK	C-3	44.3	65											09	10	11	12	13
69033	Chickasha	OK	C-4	29.9	65											09	10	11	12	13
69034	Chickasha	OK	C-5	12.8	65											09	10	11	12	13
69035	Chickasha	OK	C-6	13.0	65											09	10	11	12	13
69036	Chickasha	OK	C-7	26.5	65											09	10	11	12	13
69037	Chickasha	OK	C-8	27.3	65											09	10	11	12	13
69038	Chickasha	OK	R-1	17.8	62	74										09	10	11	12	13
69039	Chickasha	OK	R-2	24.1	62	74										09	10	11	12	13
69040	Chickasha	OK	R-3	25.8	62	74										09	10	11	12	13
69041	Chickasha	OK	R-4	18.1	62	74										09	10	11	12	13
69042	Chickasha	OK	R-5	23.7	66												10	11	12	13
69043	Chickasha	OK	R-6	27.2	66												10	11	12	13
69044	Chickasha	OK	R-7	19.2	66												10	11	12	13
69045	Chickasha	OK	R-8	27.6	66												10	11	12	13
70001	Sonora	TX	W-14	30,720.	61	73												11	12	13
70002	Sonora	TX	S-9	1,774.	61	73												11	12	13
70003	Sonora	TX	S-10	5,392.	61	73												11	12	13
70004	Sonora	TX	S-11	10,787.	61	73												11	12	13
70005	Sonora	TX	S-12	2,801.	61	73												11	12	13
70006	Sonora	TX	S-13	686.	61	73												11	12	13
70007	Sonora	TX	W-1	10.2	63													11	12	13
70008	Sonora	TX	W-2	8.6	65													11	12	13
70009	Sonora	TX	W-3	6.7	65													11	12	13
70010	Sonora	TX	W-4	4.5	66													11	12	13
70011	Sonora	TX	W-5	7.2	66													11	12	13
70012	Sonora	TX	W-6	6.9	66													11	12	13
70013	Sonora	TX	W-7	12.2	65	73												11	12	13
71001	Treynor	IA	W-1	74.5	64									08	09	10	11	12	13	
71002	Treynor	IA	W-2	82.8	64									08	09	10	11	12	13	
71003	Treynor	IA	W-3	107.	64									08	09	10	11	12	13	
71004	Treynor	IA	W-4	150.	64									08	09	10	11	12	13	
71005	Treynor	IA	W-5	389.	63	74								08	09	10	11	12	13	
72001	Cottonwood	SD	H-2	2.13	63	73										09	10	11	12	13
72002	Cottonwood	SD	L-2	2.38	63	73										09	10	11	12	13
72005	Cottonwood	SD	M-1	2.35	63	73										09	10	11	12	13
75001	Ahoskie	NC	W-A1	36,480.	64	74										09	10	11	12	13
75002	Ahoskie	NC	W-A2	15,360.	64	74										09	10	11	12	13
75003	Ahoskie	NC	W-A3	2,368.	64	74										09	10	11	12	13
75004	Ahoskie	NC	W-A4	1,664.	64	74										09	10	11	12	13

^{1/} For description of references 1-13, see page 2 and table 1.^{2/} (a) = total drainage area; (b) = study area.^{3/} B = year (19--) record began; E = year (19--) record ended.^{4/} Reference in which additional or revised watershed information has been included.^{5/} For explanation of reference numbers, see page 2 and table 1.

precipitation, and discharge for some watersheds; (6) selected runoff events; (7) graphs of selected runoff events; and (8) watershed maps, if not previously published or if revised.

Continuing Watersheds

For current watersheds for which the descriptive information has been published in references 1 and 4-13, the tabular data begin at the top of the first page. On each page at the top center is a sequential page number and the decimal paging system is shown at the bottom.

The geographic location associated with each study, usually a city and State, and the local name and number of the watershed are recorded at the top of the first page for each watershed. This identification is followed by detailed information on the geographic location and the size of the watershed.

In the space to the right of the first table title, MONTHLY PRECIPITATION AND RUNOFF (inches), the location and watershed number (or designation) are given.

In the table for the current *calendar* year, the *precipitation* (P) in inches is given in the monthly columns and the yearly total in the last column, headed *annual*. In the line below, the corresponding *runoff* (Q) in inches is similarly given for each month and the total for the year. For some watersheds, data are included for years previous to the current year. Underneath, in two lines, are given the (P) and (Q) station average amounts (STA AV) by months, with average annual total for the period of record.

In the second table, entitled ANNUAL MAXIMUM DISCHARGE (in/hr) and MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS, data are also given for the *calendar* year listed in the first column. Under the *maximum discharge* heading, the date column shows the month and day that the instantaneous peak in inches per hour occurred. In computing this rate, corrections were made, where needed, for any significant pondage above the runoff-measuring device. Under the *maximum volume* heading, the date refers to the month and day on which the interval began; for example, if the interval began August 30 at 2359, the entry in the date column would be 8-30. The depths for 1 hour to 8 days are the annual maximum values

recorded, without regard to entire clock hours or days; thus, if the 6-hour interval began at 1332, the interval would end exactly 6 hours later at 1932. The volume given is in inches of average depth over the watershed for each of the seven selected time intervals (1, 2, 6, and 12 hours and 1, 2, and 8 days). In the last section of the table, the maximum discharges and depths for the various periods are given under MAXIMUMS FOR PERIOD OF RECORD.

Notes and footnotes below the first two tables include (1) a general statement as to watershed conditions and other physical changes for the period covered; (2) a statement as to the location (publication) where the most recent map may be found; (3) a statement pertaining to the length of precipitation and runoff records; and (4) location of the nearest long-time U.S. Weather Bureau, now the National Weather Service, precipitation station together with the record length.

For some watersheds, tables of *daily air temperature* (maximum and minimum in degrees Fahrenheit), *daily precipitation* (inches), and *mean daily discharge* (cfs) are next, with explanation of the data in footnotes at the end of each table. The multiplier to convert mean daily discharge in cubic feet per second to inches per day is given as the first note to the mean daily discharge table. Cooperating agencies are located at the bottom of the first page for each watershed just above the index page number.

If no daily tables are given, the tabular data for *selected runoff events* begin in the remaining space on the first page and are carried forward on continuation sheets (or pages) until completed. In general, the *selected runoff events* were those in which runoff was produced by a relatively uniform rainfall excess of short duration. The information for each event includes tabulation of (1) *antecedent* rainfall and runoff that occurred on the day of the event prior to the beginning of the event; (2) rainfall *intensities* and *accumulated amounts* for the event; (3) runoff *rates* and *accumulated amounts* for the event; and (4) specific *watershed conditions* at the time of the event.

Simple graphs of rainfall and runoff rates are shown for all events on pages following the tabular data. Runoff rates expressed in both cubic feet per second (CFS) and inches per hour (IN HR) are shown on the graphs. Some

very low runoff rates expressed in IN/HR are shown in the "E" format, such as 7.25 E-4, which is equal to 0.000725 IN/HR.

Maps follow the graphs unless previously published in references 3-12 or unless shown herein on the map of another watershed.

In the Notes at the bottom of the first page for runoff events, the multiplier to convert runoff rates in cubic feet per second to inches per hour is given. The notes on continuation pages contain the statement on the multiplier and similar explanations of the data on each page.

New Watersheds

For the six watersheds installed in recent years and not reported previously (see table 3), the presentation begins with the watershed description in the upper part of the first page. The explanations and definitions on which the description is based are given in the next section.

The first line, centered at the top of the sheet, indicates the *project location*, which is the nearest city or town, and the number or name of the watershed used locally. The descriptive material is then given under the 12 major topics listed generally down the left side of the sheet: *Location, Area, Slopes, Soils, Erosion, Land Capability, Geology, Surface Drainage, Character of Flow, Instrumentation, Watershed Conditions, and Generally Represents.*

After this description, the tabular data are summarized in the first two tables and notes are included as previously described for Continuing Watersheds. The tabular data for daily air temperature, precipitation, and discharge, if presented, precede the tabular data for SELECTED RUNOFF EVENTS. The rest of the material of this series for the particular watershed follows in the same order as previously indicated.

WATERSHED DESCRIPTIONS

The following definitions and explanations were used in describing watershed location, watershed characteristics, instrumentation, land management, and recommended area of application of the hydrologic data.

LOCATION gives county and State, distance and direction of the runoff gaging station from the nearest city or town, and the major river

basin in which it lies. When two or more basins are involved, the tributary or subbasin is mentioned first, followed by the major basin.

AREA of watershed is given in acres if less than 640 acres, and in both acres and square miles if more than 1 square mile. If areas are revised, additional values are included with notes on date of change.

SLOPES are given in terms of the ranges commonly used in survey work in the locality. The percentages of the watershed lying in each slope class are listed. As an example, 8% is in 0-2% class means that 8 percent of the watershed area has slopes ranging from 0 to 2 percent.

SOILS are described briefly, according to definitions from the U.S. Department of Agriculture SOIL SURVEY MANUAL, Agriculture Handbook 18, published in 1951. Soil descriptions are given for the new watersheds. Soil-type name consists of the soil series plus the textural class, determined primarily by the texture of the upper part of the soil profile.

Soil texture refers to the relative proportions of the various size groups (or separates) of individual soil grains in a mass of soil. Specifically it refers to the proportions of clay, silt, and sand less than 2 mm in diameter. The various classes of texture in order of increasing percentages of the smaller size groups are (1) sand, (2) loamy sand, (3) sandy loam, (4) loam, (5) silt loam, (6) silt, (7) sandy clay loam, (8) clay loam, (9) silty clay loam, (10) sandy clay, (11) silty clay, and (12) clay. In some of the descriptions the broader classification of *coarse, moderately coarse, medium, moderately fine, and fine* has been used—the coarse soils are the sands and the fine soils the clays.

Soil structure refers to the aggregation of primary soil particles into compound particles, or clusters of primary particles, that are separated from adjoining aggregates by surfaces of weakness. Structure *grade*, or the durability of the aggregates when subjected to disturbance, is described as *structureless, weak, moderate, or strong*. For some soils the structureless grade is described as *massive*, if coherent, or *single grain*, if noncoherent. The *size* of the aggregates is reported as *very fine, fine, medium, coarse, or very coarse*. Structure *shape* is given

as being *platy, prismatic, columnar, angular blocky, subangular blocky, granular, or crumb.*

Permeability is the quality of a soil that enables it to transmit water or air. This quality is indicated by the terms *very slow, slow, moderately slow, moderate, moderately rapid, rapid, or very rapid.*

Internal soil drainage is the quality of a soil that permits the downward flow of excess water through it. Internal drainage is reflected in the frequency and duration of periods of saturation with water. It is determined by the texture, structure, and other characteristics of the soil profile and of underlying layers and by the height of the water table, either permanent or perched, in relation to the water added to the soil. *Internal drainage* is described as *none, very slow, slow, medium, rapid, or very rapid.*

Soils may be grouped into *soil drainage* classes, based on observations and inferences used to obtain classes of *runoff, soil permeability, and internal soil drainage.* These classes are given in some soils descriptions to identify *internal drainage.* They are *very poorly drained, poorly drained, imperfectly or somewhat poorly drained, moderately well drained, well drained, somewhat excessively drained, or excessively drained.*

EROSION conditions on the watershed are described according to the following classification for water and wind erosion, also briefed from Agriculture Handbook 18. The percentage of the watershed in the following erosion classes is given.

Class 1.—The soil has a few rills or places with thin A horizons that give evidence of accelerated erosion, but not to an extent to alter greatly the thickness and character of the A horizon. Except for soils having very thin A horizons (less than 8 inches), the surface soil consists entirely of A horizon throughout nearly all the delineated areas. Up to about 25 percent of the original A horizon, or original plowed layer in soils with thin A horizons, has been removed from most of the area. This class also includes the areas with no erosion.

Class 2.—The soil has been eroded to the extent that ordinary tillage implements reach through the remaining A horizon or well below the depth of the original plowed layer in soils with thin A horizons. Generally the plowed

layer consists of a mixture of the original A horizon and the underlying horizons. Mapped areas of eroded soil usually have patches in which the plowed layer consists entirely of the original A horizon, and others in which it consists entirely of underlying horizons. Shallow gullies may be present. Approximately 25 to 75 percent of the original A horizon or surface soil may have been lost from most of the area.

Class 3.—The soil has been eroded to the extent that all or practically all the original surface soil, or A horizon, has been removed. The plowed layer consists essentially of materials from the B or other underlying horizons. Patches in which the plowed layer is a mixture of the original A horizon and the B horizon, or other underlying horizons, may be included within mapped areas. Shallow gullies, or a few deep ones, are common in some soil types. More than about 75 percent of the original surface soil, or A horizon, and commonly part or all the B horizon, or other underlying horizons, have been lost from most of the area.

Class 4.—The land has been eroded until it has an intricate pattern of moderately deep or deep gullies. Soil profiles have been destroyed except in small areas between the gullies. Such land is not useful for crops in its present condition. Reclamation for crop production or for improved pasture is difficult, but may be practicable if other characteristics of the soil are favorable and erosion can be controlled.

Class +.—Recent alluvial and colluvial deposition.

LAND CAPABILITY is given as classified by Klingebiel and Montgomery in U.S. Department of Agriculture LAND-CAPABILITY CLASSIFICATION, Agriculture Handbook 210, published in 1961. The classification expresses the suitability of land for use without deterioration. The eight land-capability classes are distinguished according to the risk of land damage or difficulty of land use. Classes I–IV are suitable for cultivation and other uses, whereas classes V–VIII are not suitable for cultivation.

Class I.—Very good land for cultivation; nearly level and productive; not subject to erosion; needs only ordinary good farming methods.

Class II.—Good land for cultivation; mostly gently sloping; not more than moderately sub-

ject to erosion; some land may be rather wet; can be farmed safely with easily applied practices.

Class III.—Moderately good land for cultivation; mostly moderately sloping; some areas too wet or too dry; can be farmed safely with practical conservation measures, carefully applied; usually a combination of two or more measures is needed.

Class IV.—Fairly good land, suitable for occasional cultivation; generally strongly sloping; often shallow or very sandy; often found in dry climate.

Class V.—Land very well suited for grazing or forestry; requires good range or woodland management.

Class VI.—Land well suited for grazing or forestry; steeply sloping land, or stony or shallow soil; eroded, droughty, or wet land; requires careful management.

Class VII.—Land fairly well suited for grazing or forestry; severely limited in use by such factors as very steep slope, shallow or droughty soil, wetness, severe erosion, or excessive salinity; requires very careful management.

Class VIII.—Land not suitable for cultivation, grazing, or forestry; may be useful for wildlife, recreation, or protection of water supplies.

WATERSHED GEOLOGY information, when available, for new watersheds is reported herein. The parts of each watershed occupied by various geological formations or series are briefly described, together with strike and dip of the strata, thickness, and relative position, when known. Faults, perched water tables, outcrops, if present, and other details relating to the movement of water within the drainage area or affecting the hydrology of the watershed are described.

SURFACE DRAINAGE refers to the ease with which excess water flows from the watershed area. The length of the principal waterway is the distance from the gaging station to the most remote point on the watershed boundary, measured along the flood plain of the watercourse.

CHARACTER OF FLOW describes the flow of the principal watercourse with respect to permanence and space. The following definitions are from Meinzer's OUTLINE OF GROUND-WATER HYDROLOGY, U.S. Geological Survey Water-Supply Paper 494, published in 1923.

As to permanence, streams may be divided into perennial, intermittent, and ephemeral streams.

A *perennial stream*, or stretch of a stream, flows continuously. Perennial streams are generally fed in part by springs, and their upper surfaces usually stand lower than the water table in the localities through which they flow.

Intermittent streams may be divided, with respect to their water source, into spring-fed intermittent streams and surface-fed intermittent streams. They also flow in direct response to precipitation.

A *spring-fed intermittent stream*, or stretch of a stream, flows only at certain times when it receives water from springs. The intermittent character of streams of this type is generally caused by fluctuations of the water table, whereby the stream channels stand part of the time below and part of the time above the water table. This is the ordinary type of intermittent stream.

A *surface-fed intermittent stream*, or stretch of a stream, flows during protracted periods when it receives water from some surface source, generally the gradual and long-continued melting of snow in a mountainous or other cold tributary area. The term may be arbitrarily restricted to streams or stretches of streams that flow continuously during at least 1 month.

An *ephemeral stream*, or stretch of a stream, flows only in direct response to precipitation. It receives no water from springs and no long-continued supply from melting snow or other surface source. Its stream channel is at all times above the water table. The term may be arbitrarily restricted to streams or stretches of streams that do not flow continuously for as long as 1 month.

With respect to continuity in space, streams may be divided into continuous and interrupted streams. An *interrupted stream* contains (1) perennial stretches with intervening, intermittent, or ephemeral stretches or (2) intermittent stretches with intervening ephemeral stretches. These two classes of interrupted streams are designated, respectively, *perennial interrupted streams* and *intermittent interrupted streams*. A *continuous stream* does not have interruptions in space. It may be perennial, intermit-

tent, or ephemeral, but it does not habitually have wet and dry stretches.

INSTRUMENTATION describes the type of runoff control or measuring device, number and type of precipitation gages, type of charts used, and snow courses, if employed.

WATERSHED CONDITIONS describe the general use and farm, forest, or range practices before the period of record and the conservation measures, crops, yields, and general cultural operations and practices during the period of record. Rotation crops are listed in the order grown. Operations are described with commonly used agricultural terms, and only those that appear to have a significant relationship to the hydrology of the watershed are mentioned.

GENERALLY REPRESENTS gives the broad area of application for which the data of the specific watershed are recommended. The land resource areas named are those delineated on the map titled "Location of Experimental Agricultural Watersheds of the Science and Education Administration-Agricultural Research," on pages 16 and 17. Solid circles show the approximate locations of the continuing or new watersheds; open circles show approximate locations of the discontinued studies. For a few studies the circles indicate the locations of the project headquarters instead of the watershed locations. A larger index map with more detail is included in reference 4.

For some studies there is an apparent contradiction between the watershed location on the maps and the descriptive information under Generally Represents. This is caused by the small scale of maps; it is difficult to show many small local variations in boundaries of the land resources areas. The descriptive statements, instead of the map location, should be the guide to the application of the data.

STANDARD SYMBOLS FOR TABULAR DATA

The following capital letters have been used as standard symbols throughout this publication to designate specific items or meanings:

<i>Symbol</i>	<i>Meaning</i>
E	value is estimated or partially estimated.
H	precipitation in form of hail.
L	precipitation in form of sleet or freezing rain.

M—mixed precipitation in form of rain, snow, and sleet.

N—precipitation in form of rain and snow.

P—monthly or annual precipitation in inches.

Q—monthly or annual runoff in inches.

RG—rain gage, generally followed by gage number.

S—precipitation in form of snow.

STA AV (or AVG)—station average for period of record.

T—trace, indicates that the value is not large enough to round to the lowest significant digit. In some arrays a trace value is indicated by all zeros, with more than one zero located to the right of the decimal.

Time-of-day symbols or designations *a*, *p*, *m*, and *n* used in previous publications through 1961 have been discontinued, and military time (0001–2400) has been substituted in publications since then. Unless stated otherwise, time used in tables is eastern, central, mountain, or Pacific standard, whichever applies to the given location.

PERSONNEL RESPONSIBLE FOR DATA PREPARATION

At each research location many individuals have contributed to the planning and establishment of the watershed and the collection, compilation, and analysis of the data. Some of those who were directly responsible for preparing the data and information for this report are—

	<i>Location</i>
Rebecca B. Slack	08
Aurelius P. Barnett	10
Jan C. Carr, Vernon O. Shanholtz	13
Richard M. Weaver	16
Larry A. Krammer, Marion	
Mazzocco	21, 25, 71
Catherine A. Salrin	26
William O. Ree, Wendell R. Gwinn,	
Francis L. Wimberly	37
Clarence W. Richardson, Dee A. Wright	42, 70
Virginia A. Ferreira	45, 47, 63, 64
Gerald C. Bolton, William A. Champion,	
Robert Darden, Andrew J. Bowie,	
Robert B. Wilson	62
Clayton L. Hanson, Armine R. Kuhlman,	
David A. Woolhiser	65, 72
Rodger DeAngelis, Douglas Grant	67
Roger L. Engleman	68

	Location
Donn G. DeCoursey, Monroe A. Hartman, Arlin D. Nicks, Edd D. Rhodes, Russel R. Schoff, Oscar D. Workman ---	69
Rebecca B. Slack, Paul Yates, Thomas K. Woody -----	75

ADDITIONAL PUBLICATIONS BY LOCATION

In references 1 and 4-12 (see p. 2), citations to other publications that present watershed data and interpretations of results in various journals, bulletins, and periodicals are given at the end of the introduction for many of the locations. Following is a listing, by location number, of additional publications that have resulted from related work through 1969. Several pertaining to the overall program of hydrology that could not be tied to a specific location are included at the end of the listing under General References.

08. *Vero Beach, Florida*

McDOWELL, L. L., STEPHENS, J. C., and STEWART, E. H.

1969. RADIOCARBON CHRONOLOGY OF THE FLORIDA EVERGLADES PEAT. *Soil Sci. Soc. Amer. Proc.* 33 (5): 743-745.

SPEIR, W. H., MILLS, W. C., and STEPHENS, J. C.

1969. HYDROLOGY OF THREE EXPERIMENTAL WATERSHEDS IN SOUTHERN FLORIDA.—A PROGRESS REPORT. U.S. Dept. Agr. ARS 41-152, 50 pp.

STEPHENS, J. C.

1969. PEAT AND MUCK DRAINAGE PROBLEMS. *Amer. Soc. Civ. Engin. Proc., Irrig. Drain. Div. Jour.* 95 (IR 2): 285-305.

— and SPEIR, W. H.

1969. SUBSIDENCE OF ORGANIC SOILS IN THE USA. *Internatl. Symp. on Land Subsidence*, Tokyo, Japan, Proc. 1969 (89): 523-534.

25. *McCredie, Missouri*

JOHNSON, H. P., SAXTON, K. E., and DEBOER, D. W.

1969. THE EFFECT OF MAN ON WATER YIELD, PEAK RUNOFF, AND SEDIMENTATION. *Iowa Acad. Sci. Proc.* 76: 153-166.

KRAMER, L. A., and MEYER, L. D.

1969. SMALL AMOUNTS OF SURFACE MULCH REDUCE SOIL EROSION AND RUNOFF VELOCITY. *Amer. Soc. Agr. Engin. Trans.* 12 (5): 638-641, 645.

26. *Coshocton, Ohio*

HARROLD, L. L.

1969. EVAPOTRANSPIRATION: A FACTOR IN THE PLANT-SOIL-WATER ECONOMY. *Seminar for Hydrol. Professors Proc.* 1969 (July 13-25), 23 pp.

1969. POLLUTION OF WATER FROM AGRICULTURAL SOURCES. *Ohio Engin.* 29 (4) 10, 16.

— and DRAGON, F. J.

1969. EFFECT OF EROSION-CONTROL LAND TREATMENT ON FLOW FROM AGRICULTURAL WATERSHEDS. *Amer. Soc. Agr. Engin. Trans.* 12 (6): 857-861.

JAMIESON, D. G., and AMERMAN, C. R.

1969. QUICK-RETURN SUBSURFACE FLOW. *Jour. Hydrol.* 8 (2): 122-136.

MCGUINNESS, J. L., and VAUGHN, G. W.

1969. SEASONAL VARIATION IN RAIN GAGE CATCH. *Water Resources Res.* 5 (5): 1142-1146.

YOUKER, R. E., and EDWARDS, W. M.

1969. SIMPLIFIED BUDGETING OF FLOW LAYER MOISTURE UNDER MEADOW. U.S. Dept. Agr. ARS 41-154, 11 pp.

42. *Riesel, Texas*

BURNETT, E.

1969. PROFILE MODIFICATION FOR IMPROVED WATER INTAKE AND STORAGE. *Great Plains Agr. Council, Manhattan, Kans., Proc.* 1 (34): 59-63.

DRAGON, F. J.

1969. EFFECTS OF CULTIVATION AND GRASS ON SURFACE RUNOFF. *Water Resources Res.* 5 (5): 1078-1083.

HARTMAN, M. A., NICKS, A. D., ROADES, E. D., and others.

1969. FIELD EXPERIMENT ON WASHITA RIVER. *Water Resources Symp. No. 2*, Univ. Tex. Press, Austin, pp. 136-149.

KNISEL, W. G., JR., BAIRD, R. W., and HARTMAN, M. A.

1969. RUNOFF VOLUME PREDICTION FROM DAILY CLIMATIC DATA. *Water Resources Res.* 5 (1): 84-94.

RICHARDSON, C. W., BAIRD, R. W., and SMERDON, E. T.

1969. COMPUTER METHODS FOR PREDICTING STORM HYDROGRAPHS BASED ON ANTECEDENT SOIL MOISTURE. *Amer. Soc. Agr. Engin. Trans.* 12 (2): 266-269.

WILLIAMS, J. R.

1969. FLOOD ROUTING WITH VARIABLE TRAVEL TIME OF VARIABLE STORAGE COEFFICIENTS. *Amer. Soc. Agr. Engin. Trans.* 12 (1): 100-103.

62. *Oxford, Mississippi*

COLEMAN, N. L.

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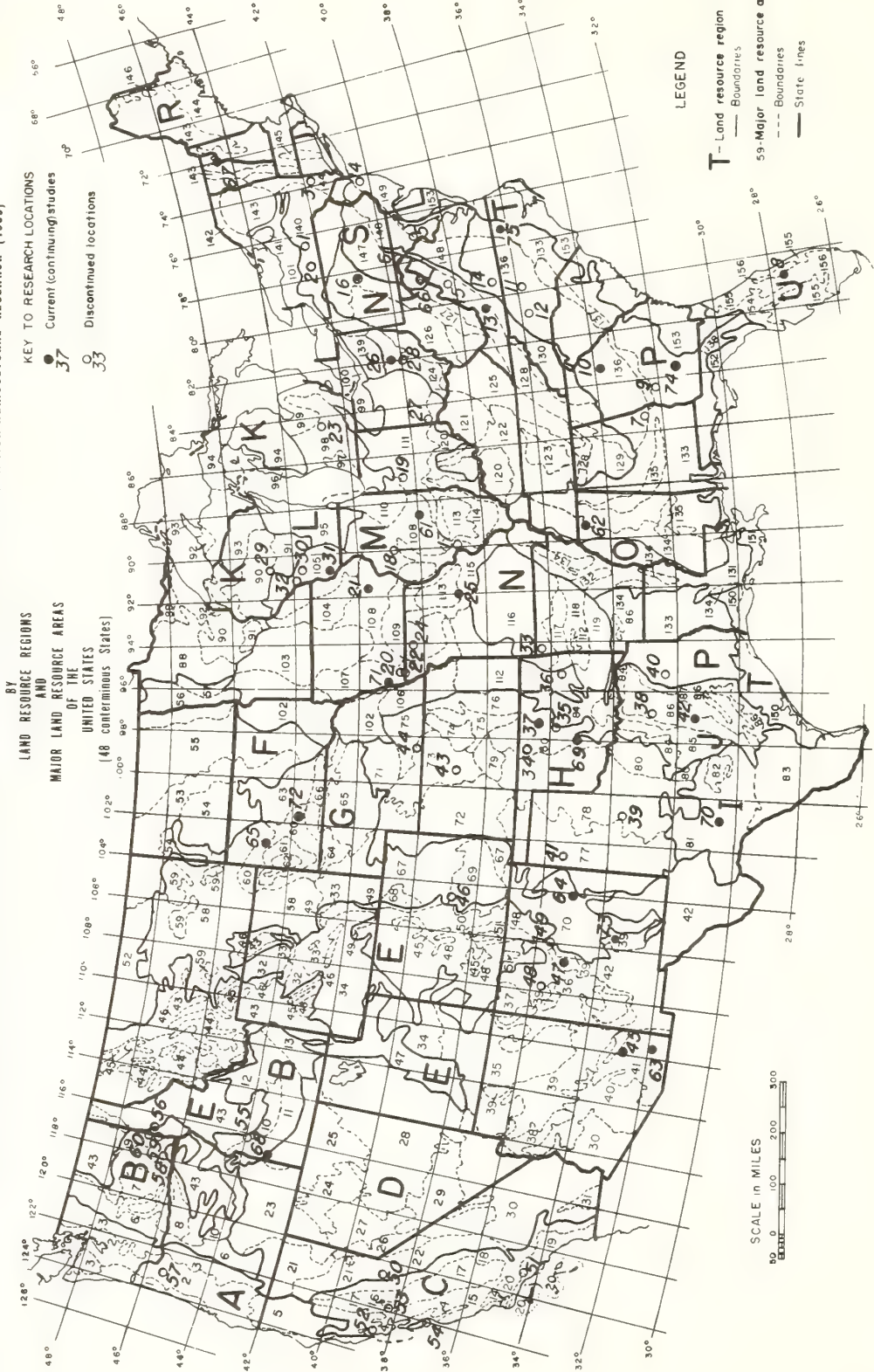
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UNITED STATES INDEX MAP AND RELATED DATA

[Pages 16 through 18]

LOCATION OF EXPERIMENTAL AGRICULTURAL WATERSHEDS OF THE SCIENCE AND EDUCATION ADMINISTRATION-AGRICULTURAL RESEARCH (1969)



LEGEND FOR LAND RESOURCE REGIONS AND MAJOR LAND RESOURCE AREAS (of the 48 conterminous States)

<p>A NORTHWESTERN FOREST, FORAGE, AND SPECIALTY CROP REGION</p> <ol style="list-style-type: none"> 1 Northern Pacific Coast Range and Valleys 2 Willamette and Puget Sound Valleys 3 Olympic and Western Slope Cascade Mountains 4 California Coastal Redwood Belt 5 Snakey-Trinity Area 	<p>F NORTHERN GREAT PLAINS SPRING WHEAT REGION</p> <ol style="list-style-type: none"> 52 Brown Glaciated Plain 53 Dark Brown Glaciated Plain 54 Rolling Soil Shale Plain 55 Black Glaciated Plains 56 Red River Valley of the North 57 Western Minnesota Forest-Prairie Transition 	<p>N EAST AND CENTRAL GENERAL FARMING AND FOREST REGION</p> <ol style="list-style-type: none"> 105 Northern Mississippi Valley Loess Hills 106 Nebraska and Kansas Loess-Drift Hills 107 Iowa and Missouri Deep Loess Hills 108 Illinois and Iowa Deep Loess and Drift 109 Iowa and Missouri Heavy Till Plain 110 Northern Illinois and Indiana Heavy Till Plain 111 Indiana and Ohio Till Plain 112 Cherokee Prairies 113 Central Claypan Areas 114 Southern Illinois and Indiana Thin Loess and Till Plain 115 Central Mississippi Valley Wooded Slopes
<p>B NORTHWESTERN WHEAT AND RANGE REGION</p> <ol style="list-style-type: none"> 6 Eastern Slope Cascade Mountains 7 Columbia Basin 8 Palouse Plateau 9 Palouse and Nez Perce Prairies 10 Upper Snake River Lava Plains and Hills 11 Snake River Plains 12 Lost River Valleys and Mountains 13 Eastern Idaho Plateaus 	<p>G WESTERN GREAT PLAINS RANGE AND IRRIGATED REGION</p> <ol style="list-style-type: none"> 58 Northern Rolling High Plains 59 Northern Smooth High Plains 60 Pierre Shale Plains and Badlands 61 Black Hills Footslopes 62 Black Hills 63 Rolling Pierre Shale Plains 64 Mixed Sandy and Silty Tableland 65 Nebraska Sand Hills 66 Dakota-Nebraska Eroded Tableland 67 Central High Plains 68 Irrigated Upper Platte River Valley 69 Upper Arkansas Valley Rolling Plains 70 Pecos-Canadian Plains and Valleys 	<p>O MISSISSIPPI DELTA COTTON AND FEED GRAINS REGION</p> <ol style="list-style-type: none"> 131 Southern Mississippi Valley Alluvium 132 Eastern Arkansas Prairies 134 (See P below)
<p>C CALIFORNIA SUBTROPICAL FRUIT, TRUCK, AND SPECIALTY CROP REGION</p> <ol style="list-style-type: none"> 14 Central California Valleys 15 Central California Coast Range 16 California Delta 17 Sacramento and San Joaquin Valleys 18 Sierra Nevada Foothills 19 Southern California Coastal Plain 20 Southern California Mountains 	<p>H CENTRAL GREAT PLAINS WINTER WHEAT AND RANGE REGION</p> <ol style="list-style-type: none"> 71 Central Nebraska Loess Hills 72 Central High Tableland 73 Rolling Plains and Breaks 74 Central Kansas Sandstone Hills 75 Central Loess Plains 76 Bluestem Hills 77 Southern High Plains 78 Central Rolling Red Plains 79 Great Bend Sand Plains 80 Central Rolling Red Prairies 	<p>P SOUTH ATLANTIC AND GULF SLOPE CASH CROP, FOREST, AND LIVESTOCK REGION</p> <ol style="list-style-type: none"> 86 (See J Above) 133 Southern Coastal Plain 134 Southern Mississippi Valley Silty Uplands 135 Alabama and Mississippi Blackland Prairies 136 Southern Piedmont 137 Carolina and Georgia Sandhills 138 North Central Florida Ridge
<p>D WESTERN RANGE AND IRRIGATED REGION</p> <ol style="list-style-type: none"> 21 Klamath and Shasta Valleys and Basins 22 Sierra Nevada Range 23 Malheur High Plateau 24 Humboldt Area 25 Owyhee High Plateau 26 Carson Basin and Mountains 27 Fallon Lovelock Area 28 Great Salt Lake 29 Southern Nevada Basin and Range 30 Sonoran Basin and Range 31 Imperial Valley 32 Northern Intermountain Desertic Basins 33 Semiarid Rocky Mountains 34 Central Desertic Basins, Mountains and Plateaus 49 (See E below) 	<p>I SOUTHWESTERN PLATEAUS AND PLAINS, RANGE AND COTTON REGION</p> <ol style="list-style-type: none"> 81 Edwards Plateau 82 Texas Central Basin 83 Rio Grande Plain 	<p>R NORTHEASTERN FORAGE AND FOREST REGION</p> <ol style="list-style-type: none"> 139 Eastern Ohio Till Plain 140 Glaciated Allegheny Plateau and Catskill Mountains 141 Tug Valley Plateau 142 Shaw-Lawrence-Champlain Plain 143 Northeastern Mountains 144 New England and Eastern New York Upland 145 Connecticut Valley 146 Aroostook Area
<p>E ROCKY MOUNTAIN RANGE AND FOREST REGION</p> <ol style="list-style-type: none"> 41 Northern Rocky Mountains 42 Northern Rocky Mountain Valleys 43 Alpine Meadows and Ruckland 44 Northern Rocky Mountain Foothills 45 Wasatch and Uinta Mountains 46 Southern Rocky Mountains 47 Southern Rocky Mountain Foothills 48 San Luis Valley 51 High Intermountain Valleys 	<p>J SOUTHWESTERN PRAIRIES, COTTON, AND FORAGE REGION</p> <ol style="list-style-type: none"> 84 Cross Timbers 85 Grand Prairie 86 Texas Blackland Prairie 87 Texas Claypan Area 	<p>S NORTHERN ATLANTIC SLOPE TRUCK, FRUIT, AND POULTRY REGION</p> <ol style="list-style-type: none"> 147 Northern Appalachian Ridges and Valleys 148 Northern Piedmont 149 Northern Coastal Plain
<p>F NORTHERN PACIFIC COAST RANGE AND VALLEYS</p> <ol style="list-style-type: none"> 1 Northern Pacific Coast Range and Valleys 2 Willamette and Puget Sound Valleys 3 Olympic and Western Slope Cascade Mountains 4 California Coastal Redwood Belt 5 Snakey-Trinity Area 	<p>K NORTHERN LAKE STATES FOREST AND FORAGE REGION</p> <ol style="list-style-type: none"> 88 Northern Minnesota Swamps and Lakes 89 Minnesota Rockland Hills 90 Central Wisconsin and Minnesota Thin Loess and Till 91 Wisconsin and Minnesota Sandy Outwash 92 Superior Lake Plain 93 Northern Michigan and Wisconsin Stony, Sandy, and Rocky Plains and Hills 94 Northern Michigan Sandy Drift 	<p>T ATLANTIC AND GULF COAST LOWLANDS, FOREST AND TRUCK CROP REGION</p> <ol style="list-style-type: none"> 150 Gulf Coast Prairies 151 Gulf Coast Marsh 152 Gulf Coast Flatwoods 153 Atlantic Coast Flatwoods
<p>G WESTERN GREAT PLAINS RANGE AND IRRIGATED REGION</p> <ol style="list-style-type: none"> 58 Northern Rolling High Plains 59 Northern Smooth High Plains 60 Pierre Shale Plains and Badlands 61 Black Hills Footslopes 62 Black Hills 63 Rolling Pierre Shale Plains 64 Mixed Sandy and Silty Tableland 65 Nebraska Sand Hills 66 Dakota-Nebraska Eroded Tableland 67 Central High Plains 68 Irrigated Upper Platte River Valley 69 Upper Arkansas Valley Rolling Plains 70 Pecos-Canadian Plains and Valleys 	<p>L LAKE STATES FRUIT, TRUCK, AND DAIRY REGION</p> <ol style="list-style-type: none"> 95 Southeastern Wisconsin Drift Plain 96 Western Michigan Fruit Belt 97 Southwestern Michigan Fruit and Truck Belt 98 Southern Michigan Drift Plain 99 Erie-Huron Lake Plain 100 Erie Fruit and Truck Area 101 Ontario-Mobawak Plain 	<p>U FLORIDA SUBTROPICAL FRUIT, TRUCK CROP, AND RANGE REGION</p> <ol style="list-style-type: none"> 154 South Central Florida Ridge 155 Southern Florida Flatwoods 156 Florida Everglades and Associated Areas

Compiled by Morris E. Austin

Information from SCS, State, and other Offices

Table 3. Experimental agricultural watersheds, listed by State, locality, and location number, under study during 1969 and included in this publication

State	Locality	Assigned location number	Major land resource area ^{1/}	Watershed units	Events reported	Pages
Arizona.....	Tombstone.....	63	D-41	<u>2</u> / 8	15	299-331
Florida.....	Vero Beach.....	08	U-55	2	0	20-26
Georgia.....	Watkinsville.....	10	P-136	1	1	27-29
Idaho.....	Reynolds.....	68	D-23, D-25	8	10	364-401
Iowa.....	Treynor.....	71	M-107	5	0	572-581
Mississippi....	Oxford.....	62	P-133, P-134	12	12	261-298
Missouri.....	McCredie.....	25	M-113	1	2	55-60
New Mexico.....	Santa Rosa.....	64	G-70	1	0	332-334
North Carolina	Ahoskie.....	75	P-133	4	4	590-602
Ohio.....	Coshocton.....	26	N-124	<u>3</u> /34	34	61-167
Oklahoma.....	Chickasha.....	69	H-78, H-80, J-84	<u>4</u> /34	59	402-529
	Stillwater.....	37	H-80	3	6	168-184
Pennsylvania...	Klingerstown.....	16	S-147	1	2	48-54
South Dakota...	Newell.....	65	G-58, G-59, G-60	7	0	335-348
	Cottonwood.....	72	G-60	3	2	582-589
Texas.....	Riesel (Waco).....	42	J-86	<u>5</u> /20	18	185-260
	Sonora.....	70	I-81	13	13	530-571
Vermont.....	North Danville.....	67	R-144	5	5	349-363
Virginia.....	Blacksburg.....	13	N-128, N-130, P-136, S-148	<u>6</u> / 5	5	30-47

^{1/} See location map (p. 16) and legend (p. 17).^{2/} 2 watersheds (Tombstone, Ariz.) discontinued, 1969.^{3/} Includes data for watershed 166 (new).^{4/} Includes data for watershed 611 near Alex (new).^{5/} 5 watersheds (Riesel (Waco) Tex.) discontinued, 1969. Watershed S-11 reestablished, 1969.^{6/} Includes data for watersheds Y-13, Y-14, W-12, and W-13 (new).^{6/} 5 watersheds (Blacksburg, Va.) discontinued, 1969.Table 4. Watersheds, listed by State and locality, where observations were discontinued during 1968^{1/}

State	Locality	Major land resource area ^{2/}	Number	Discontinued watershed units	
				Record period (19--)	Assigned location and watershed number
Arizona.....	Tombstone.....	D-41	1	62-68	63.111
			1	65-68	63.103
Texas.....	Riesel (Waco).....	J-86	1	39-68	42.013
			4	38-68	42.031-42.-34
Virginia....	Blacksburg.....	N-128, N-130, P-136, S-147, S-148	1	57-68	13.006
			2	58-68	13.009, 13.012
			1	59-68	13.013
			1	60-68	13.014

^{1/} For discontinued watershed studies prior to 1968, see tables in previous publications.^{2/} See location map (p. 16) and legend (p. 17).

**WATERSHED DATA BY LOCATION NUMBER
AND
DECIMAL PAGING**

[8.002-1 TO 75.004-3, A TOTAL OF 583 DATA SHEETS]

For location by States and Land Resource Areas
and Regions, see U.S. Index Map, page 16.

VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-2

LOCATION: Okeechobee County, Florida. Runoff gaging site is about 3 mi. N. of City of Okeechobee on Cemetery Road. Taylor Creek empties into Lake Okeechobee.

AREA: 63170.00 acres 98.70 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)												VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-2	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1968 P	0.71	1.67	0.66	0.32	6.66	15.98	8.96	3.78	5.72	5.12	2.34	0.11	52.03
Q	0.161	0.121	0.092	0.035	0.144	8.299	6.101	0.832	1.657	2.272	0.896	0.186	20.796
1969 P	1.98	1.19	8.23	1.67	7.15	8.26	5.25	9.19	5.41	10.26	3.76	2.10	64.46
Q	0.280	0.158	4.384	0.268	1.652	6.225	0.843	4.681	1.712	5.992	3.352	1.299	30.846
STA AV P	1.86	2.42	3.24	2.13	4.30	8.66	6.41	6.76	6.46	4.36	1.36	1.57	49.53
Q	0.393	0.452	1.044	0.193	0.397	2.320	2.053	2.196	2.827	2.266	2.339	0.224	16.705

NOTES: Watershed conditions: 1968: Range & forest, 48%; improved pasture, 40%; cropland, 2%; miscellaneous, 10%. 1969: Range & forest, 45%; improved pasture, 41%; cropland, 4%; miscellaneous, 10%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p.8-2-4. Precipitation and runoff records began July 1955. Precipitation Thiessen weighted using 7 gages. Runoff data furnished by U.S. Geological Survey. For long-time precipitation records, see U.S. Weather Bureau records at Okeechobee Hurricane Gate 6, Florida.

1968 DAILY AIR TEMPERATURE (degrees F)												VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	
1	80 53	79 54	72 35	85 57	86 55	90 70	87 73	88 74	90 71	88 71	80 59	84 63	
2	81 56	78 57	56 31	88 58	90 56	80 73	88 73	91 72	92 68	86 67	81 61	86 60	
3	85 57	79 61	69 51	86 61	91 60	84 70	83 72	85 74	91 72	89 66	83 61	86 61	
4	82 54	75 46	74 44	85 62	91 65	76 74	87 72	90 73	93 73	91 66	83 59	83 65	
5	82 61	76 53	70 39	86 61	89 70	77 71	88 74	85 75	93 72	90 66	85 69	66 34	
6	75 56	77 56	73 49	89 70	88 63	74 69	81 73	92 74	93 72	90 65	82 60	65 38	
7	82 53	74 42	71 47	91 66	86 63	85 69	84 73	92 75	93 70	88 69	81 54	71 49	
8	82 59	67 41	74 48	89 63	84 68	88 71	86 74	92 73	93 72	93 69	83 58	76 49	
9	72 55	57 33	76 51	88 60	82 64	90 74	85 74	92 76	95 71	93 69	82 60	65 40	
10	79 63	63 36	79 65	88 55	82 66	88 70	89 73	88 74	90 71	91 70	82 60	70 45	
11	78 65	66 52	86 67	88 61	85 67	90 71	91 73	87 76	89 68	90 70	69 55	71 38	
12	73 51	68 56	88 70	80 53	86 68	91 72	92 76	85 74	89 71	87 69	80 46	70 44	
13	68 51	72 43	87 57	79 60	91 65	90 75	84 75	92 75	82 72	87 68	62 37	74 62	
14	66 40	70 36	64 44	83 57	90 62	89 71	91 75	92 73	82 69	86 68	59 44	74 55	
15	62 44	71 38	74 61	86 58	90 65	87 73	88 74	91 74	90 68	85 68	75 59	77 35	
16	61 41	77 47	76 64	82 60	92 65	85 70	90 76	92 72	91 69	91 71	77 58	52 25	
17	59 39	81 57	79 62	88 64	93 67	86 73	88 74	94 75	89 67	84 71	83 57	60 31	
18	74 49	76 48	82 51	81 62	91 69	87 73	92 71	94 73	91 70	82 76	84 66	71 49	
19	71 50	76 57	80 51	86 59	92 73	83 74	90 72	93 74	93 71	86 77	86 54	77 62	
20	76 54	61 50	84 49	90 60	88 69	84 74	88 75	95 75	94 73	87 65	63 40	81 65	
21	76 56	62 40	87 48	92 61	92 64	88 73	93 73	95 75	88 72	85 62	62 40	82 58	
22	76 43	71 53	89 61	95 66	87 64	91 74	91 72	94 76	88 69	87 64	68 44	82 59	
23	77 42	79 62	84 58	95 66	86 66	90 72	90 73	93 76	88 70	88 71	74 50	82 65	
24	79 56	72 53	67 35	95 67	86 71	91 71	90 74	94 74	87 69	84 71	78 53	79 37	
25	69 49	62 33	67 40	95 68	87 71	94 75	92 75	92 72	88 69	80 70	78 56	59 34	
26	53 34	64 36	74 53	81 65	89 74	89 73	92 75	90 73	88 72	81 51	70 50	65 41	
27	64 51	68 51	78 53	88 66	82 71	86 72	93 74	92 68	83 72	71 52	75 61	75 53	
28	74 57	68 33	78 58	92 62	89 73	86 74	95 73	89 67	89 72	80 61	77 61	79 65	
29	78 54	70 59	81 51	95 66	90 70	88 70	96 76	89 75	89 73	78 51	84 66	76 51	
30	79 57		80 50	93 68	84 68	88 74	97 72	91 74	89 73	72 46	85 63	73 49	
31	72 50		82 54		90 65		92 74	88 71		77 56		80 55	
AV.	73 51	66 44	76 51	85 60	88 66	83 69	89 73	91 73	86 68	85 65	74 53	74 49	
MEAN	62.7	55.6	64.2	72.6	77.2	76.8	81.8	82.5	77.6	75.6	64.1	61.8	
STA AV	74 51	75 53	78 56	84 62	88 67	89 73	90 74	92 74	89 73	86 66	79 60	74 51	

NOTES: Temperature data from B-3, readings taken daily. STA AV period from July 1, 1956 through 1968.

1969 DAILY AIR TEMPERATURE (degrees F)												VERO BEACH, FLORIDA (TAYLOR CREEK)												WATERSHED W-2			
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min			
1	89	63	80	50	79	53	80	60	86	64	91	68	90	75	88	74	93	76	90	76	78	72	67	41			
2	65	40	80	51	76	42	81	66	79	66	90	69	92	73	92	72	92	74	91	73	81	63	69	48			
3	72	46	83	60	73	55	76	65	76	68	92	70	90	73	91	72	89	74	88	75	81	61	70	43			
4	76	63	81	43	64	47	84	62	82	67	93	72	92	74	92	76	89	73	88	74	82	62	70	48			
5	73	49	60	38	63	40	84	62	82	64	93	72	92	75	89	72	90	74	91	75	76	44	68	43			
6	55	51	71	42	67	49	87	69	86	64	87	69	93	76	87	71	89	73	87	68	66	46	71	53			
7	67	38	78	59	76	53	85	70	85	66	85	68	95	78	90	73	87	73	87	70	71	50	74	66			
8	67	41	79	51	72	56	80	59	85	60	90	71	94	75	92	76	84	71	88	69	72	48	74	57			
9	73	43	79	63	69	60	80	63	85	64	88	70	96	74	88	73	91	74	88	66	79	63	75	61			
10	81	56	71	41	73	43	76	66	88	60	91	71	94	75	91	73	92	72	88	68	79	52	80	71			
11	71	57	71	49	62	44	84	66	86	59	92	78	96	77	95	73	90	71	87	67	78	48	77	57			
12	77	54	74	56	63	42	87	68	89	71	92	73	96	76	92	74	90	72	89	64	80	51	71	52			
13	67	52	74	46	60	47	84	66	84	68	88	74	95	77	90	73	82	67	88	63	80	63	64	39			
14	71	47	71	43	65	42	79	66	84	72	87	74	91	75	89	74	91	72	87	63	84	66	59	39			
15	71	46	73	65	70	52	77	67	86	67	81	73	93	72	91	75	87	72	87	65	74	38	68	48			
16	74	45	74	56	70	58	83	67	92	72	92	74	91	73	92	76	88	73	92	66	57	42	74	47			
17	72	50	72	43	71	64	88	70	83	70	93	75	93	76	91	75	89	73	90	70	71	58	74	49			
18	70	61	56	40	75	66	89	74	84	70	93	74	94	76	92	76	89	76	88	72	79	64	71	45			
19	77	59	62	37	84	63	91	74	86	74	92	73	92	73	93	74	87	74	80	72	82	60	78	46			
20	79	65	61	37	72	57	81	58	88	71	93	76	89	75	92	73	87	77	86	73	83	54	73	49			
21	78	53	70	47	77	56	84	63	89	69	91	74	92	74	95	74	91	74	89	72	66	49	71	51			
22	74	49	73	52	80	57	80	63	88	70	90	72	92	75	96	77	92	75	86	74	72	51	76	57			
23	77	51	73	59	82	59	84	61	87	70	94	73	91	74	92	73	90	72	90	72	74	63	67	41			
24	81	56	80	54	79	70	87	61	87	66	94	74	94	75	93	74	91	71	87	70	77	61	69	53			
25	83	55	68	45	87	73	86	60	86	64	94	73	94	75	84	73	87	70	76	72	78	61	78	50			
26	77	47	70	36	75	56	78	59	88	68	95	76	93	76	86	73	89	73	79	71	76	60	78	63			
27	76	58	72	42	62	49	80	56	88	69	94	75	93	76	90	70	90	73	78	70	78	66	65	37			
28	77	54	76	41	64	48	83	67	86	69	92	76	92	75	89	72	89	72	86	70	76	65	67	38			
29	76	55			72	59	83	66	84	69	91	73	90	72	89	71	89	71	87	71	81	62	77	48			
30	75	52			78	61	90	67	87	66	90	76	92	76	89	72	80	70	73	68	72	52	78	57			
31	77	49			79	61			90	70			93	75	91	74			76	71			78	65			
AV.	74	51	65	43	72	54	80	62	85	67	88	70	92	74	90	73	86	70	86	70	73	54	72	50			
MEAN	63.0		54.5		63.3		71.5		76.5		79.3		83.8		82.1		78.2		78.1		64.2		61.2				
STA AV	74	51	74	52	77	55	83	62	87	67	89	72	90	74	91	74	88	72	86	66	78	59	73	51			

NOTES: Temperature data from R-3, readings taken daily. STA AV period from July 1, 1956 through 1969.

1968					DAILY PRECIPITATION (inches)					VERO BEACH, FLORIDA (TAYLOR CREEK)					WATERSHED W-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
1	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.02	0.0	0.0	0.0	0.0				
2	0.0	0.0	0.0	0.0	0.0	0.33	1.67	0.16	0.0	0.0	0.0	0.0				
3	0.0	0.0	0.0	0.0	0.0	2.74	0.13	0.09	0.0	0.0	0.0	0.0				
4	0.0	0.0	0.0	0.0	0.35	1.64	0.28	0.70	0.0	0.0	0.0	0.0				
5	0.0	0.19	0.0	0.05	0.05	1.11	0.62	0.0	0.02	0.0	0.0	0.0				
6	0.0	0.01	0.55	0.01	0.0	0.00	1.11	0.0	0.20	0.0	0.0	0.0				
7	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.18	0.0	0.0				
8	0.0	0.0	0.0	0.0	0.0	0.42	0.32	0.34	0.40	0.04	0.0	0.0				
9	0.0	0.0	0.0	0.0	0.01	0.93	0.27	0.03	0.75	0.04	1.59	0.0				
10	0.31	0.0	0.0	0.0	0.02	0.48	0.58	0.28	0.36	0.51	0.01	0.0				
11	0.0	0.15	0.0	0.09	0.03	1.31	0.01	0.0	0.79	0.15	0.66	0.0				
12	0.0	0.0	0.11	0.0	0.03	0.01	0.0	0.0	0.15	0.0	0.0	0.0				
13	0.14	0.0	0.0	0.0	0.02	1.69	0.01	0.12	0.65	0.01	0.00	0.0				
14	0.00	0.0	0.0	0.0	0.00	0.01	0.47	0.22	0.0	0.02	0.0	0.0				
15	0.0	0.0	0.0	0.08	0.57	0.91	0.0	0.19	0.0	1.37	0.0	0.0				
16	0.0	0.0	0.0	0.0	0.0	0.58	0.30	0.0	0.0	0.0	0.0	0.0				
17	0.0	0.0	0.0	0.0	0.22	0.08	0.0	0.12	0.0	1.46	0.0	0.0				
18	0.0	0.05	0.0	0.0	0.00	0.09	0.42	0.0	0.0	0.03	0.0	0.0				
19	0.0	0.80	0.0	0.0	1.51	0.39	0.05	0.0	0.65	0.52	0.0	0.0				
20	0.0	0.0	0.0	0.0	0.0	0.35	0.48	0.05	0.18	0.0	0.05	0.0				
21	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.0	0.09	0.0	0.0	0.0				
22	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0				
23	0.0	0.40	0.0	0.0	0.28	0.0	0.03	0.13	0.41	0.71	0.0	0.02				
24	0.20	0.0	0.0	0.0	0.60	0.0	0.0	0.00	0.26	0.01	0.0	0.0				
25	0.0	0.0	0.0	0.0	1.05	0.60	0.01	0.01	0.15	0.07	0.0	0.0				
26	0.0	0.0	0.0	0.0	0.52	1.17	0.02	0.06	0.64	0.0	0.0	0.0				
27	0.0	0.0	0.0	0.04	0.13	0.00	0.0	0.01	0.01	0.0	0.00	0.0				
28	0.0	0.0	0.0	0.0	0.43	0.91	0.0	0.31	0.01	0.00	0.0	0.10				
29	0.0	0.08	0.0	0.05	0.84	0.21	0.46	0.23	0.0	0.0	0.02	0.0				
30	0.07	0.0	0.0	0.0	0.0	0.00	0.08	0.61	0.0	0.0	0.0	0.0				
31	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.08	0.0	0.0	0.0	0.0				
TOTAL STA AV	0.71 1.85	1.67 2.51	0.66 2.88	0.32 2.16	6.66 4.10	15.98 8.69	8.96 6.49	3.78 6.60	5.72 6.53	5.12 3.96	2.34 1.20	0.11 1.54				

1969 DAILY PRECIPITATION (inches)													VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.11	0.0	0.23	0.01	0.0		
2	0.0	0.0	0.0	0.53	0.0	0.0	0.07	0.08	0.11	2.99	0.0	0.0		
3	0.0	0.0	0.64	0.0	2.10	0.0	0.0	0.50	0.0	0.62	0.0	0.0		
4	0.72	0.0	0.0	0.0	0.00	0.09	0.47	0.75	0.0	0.0	0.00	0.0		
5	0.83	0.0	0.0	0.01	0.0	0.11	0.01	0.00	0.04	0.16	0.0	0.0		
6	0.09	0.0	0.26	0.05	0.0	0.96	0.01	0.15	0.32	0.03	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.05	0.05	0.38	0.27	0.01	0.0	0.14		
8	0.0	0.12	3.90	0.0	0.0	0.12	0.0	0.65	0.0	0.03	0.0	0.00		
9	0.0	0.06	0.64	0.0	0.0	0.0	0.0	0.35	1.16	0.0	0.03	0.01		
10	0.0	0.0	0.0	0.02	0.07	0.01	0.01	1.73	0.19	0.0	0.0	1.72		
11	0.15	0.0	0.0	0.0	0.0	0.41	0.0	0.38	0.01	0.0	0.0	0.0		
12	0.0	0.04	0.0	0.0	1.02	1.57	0.0	0.61	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.11	0.0	0.0	0.54	0.04	0.87	0.03	0.0	0.85	0.0		
14	0.0	0.0	0.0	0.0	1.63	1.26	0.40	0.20	0.03	0.0	1.71	0.0		
15	0.0	0.96	0.0	0.0	0.13	0.79	0.40	0.59	0.25	0.0	0.0	0.0		
16	0.0	0.0	2.03	0.36	0.00	1.09	0.21	0.20	0.16	0.0	0.0	0.0		
17	0.0	0.0	0.18	0.0	0.11	0.04	0.0	0.07	0.0	0.03	0.0	0.0		
18	0.00	0.0	0.01	0.06	0.00	0.04	1.29	0.31	1.06	0.97	0.0	0.0		
19	0.14	0.0	0.0	0.00	0.01	0.80	0.58	0.01	0.01	0.54	0.0	0.0		
20	0.04	0.0	0.0	0.0	1.60	0.80	0.63	0.0	0.03	0.00	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.0	0.05	0.01	0.0	0.07	0.01	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.19	0.00	0.14	0.0	0.11		
23	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.27	0.66	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.82	0.03	0.0		
25	0.0	0.0	0.45	0.0	0.0	0.0	0.0	1.20	0.0	0.04	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.03	0.00	0.0	0.02	0.08	0.11	0.12		
27	0.01	0.0	0.0	0.0	0.0	0.0	0.03	0.05	0.0	0.01	0.32	0.0		
28	0.01	0.0	0.0	0.62	0.31	0.0	0.92	0.0	0.13	0.12	0.72	0.0		
29	0.0	0.0	0.0	0.0	0.07	0.04	0.01	0.0	0.42	1.72	0.0	0.0		
30	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.24	0.0	0.0		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.03	0.0	0.69	0.0	0.0		
TOTAL	1.98	1.19	8.23	1.67	7.15	9.00	5.25	9.40	5.41	10.12	3.76	2.10		
STA AV	1.86	2.42	3.24	2.13	4.30	8.66	6.41	6.76	6.46	4.36	1.36	1.57		

NOTES: Thiessen weighted rainfall, using 7 rain gages. STA AV based on period July 1, 1955 through 1969.

1968 MEAN DAILY DISCHARGE (cfs)													VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	15.0	12.0	11.0	4.1	2.2	24.0	430.0	60.0	74.0	67.0	44.0	24.0		
2	15.0	11.0	10.0	4.4	1.9	20.0	801.0	53.0	51.0	52.0	38.0	24.0		
3	15.0	11.0	9.5	4.1	1.7	66.0	1350.0	64.0	34.0	40.0	33.0	23.0		
4	14.0	9.7	9.0	3.7	1.9	651.0	836.0	99.0	27.0	32.0	30.0	22.0		
5	15.0	9.7	9.0	3.4	2.1	1080.0	927.0	172.0	25.0	28.0	28.0	21.0		
6	13.0	11.0	9.8	3.1	1.6	1110.0	1400.0	104.0	24.0	24.0	27.0	21.0		
7	14.0	10.0	12.0	3.6	1.4	440.0	1890.0	67.0	25.0	22.0	24.0	21.0		
8	12.0	8.6	11.0	3.9	1.3	375.0	1460.0	62.0	25.0	36.0	21.0	20.0		
9	12.0	7.6	11.0	3.5	1.3	536.0	811.0	92.0	66.0	38.0	34.0	19.0		
10	13.0	8.2	11.0	3.4	1.5	767.0	536.0	97.0	165.0	35.0	278.0	18.0		
11	14.0	8.2	10.0	3.9	1.8	794.0	552.0	97.0	215.0	137.0	249.0	18.0		
12	14.0	9.2	10.0	3.8	1.7	1590.0	487.0	69.0	319.0	105.0	436.0	17.0		
13	16.0	8.8	10.0	3.6	1.6	1260.0	325.0	50.0	291.0	66.0	264.0	16.0		
14	17.0	7.6	9.0	3.4	1.4	1800.0	267.0	65.0	455.0	48.0	157.0	16.0		
15	16.0	8.2	8.7	3.6	5.4	1300.0	340.0	112.0	245.0	94.0	113.0	15.0		
16	15.0	9.2	8.2	3.7	9.4	1510.0	257.0	120.0	134.0	351.0	89.0	15.0		
17	14.0	9.6	7.6	3.7	7.2	1190.0	303.0	96.0	85.0	625.0	70.0	12.0		
18	13.0	9.3	7.3	3.4	8.6	713.0	195.0	84.0	61.0	898.0	58.0	13.0		
19	13.0	9.4	7.3	3.1	14.0	561.0	205.0	98.0	60.0	589.0	52.0	12.0		
20	13.0	15.0	6.4	2.8	21.0	656.0	189.0	69.0	205.0	526.0	46.0	12.0		
21	13.0	15.0	6.0	2.7	17.0	640.0	397.0	52.0	137.0	312.0	40.0	12.0		
22	12.0	16.0	6.0	2.3	13.0	445.0	626.0	42.0	102.0	197.0	36.0	13.0		
23	12.0	16.0	6.3	2.2	14.0	284.0	522.0	39.0	90.0	150.0	33.0	13.0		
24	14.0	18.0	5.3	2.1	12.0	189.0	327.0	37.0	181.0	495.0	30.0	12.0		
25	13.0	15.0	4.9	1.8	15.0	135.0	195.0	35.0	258.0	373.0	27.0	11.0		
26	14.0	13.0	4.9	1.8	26.0	454.0	128.0	33.0	205.0	241.0	25.0	11.0		
27	13.0	12.0	4.9	1.7	27.0	1070.0	99.0	31.0	379.0	145.0	24.0	12.0		
28	13.0	10.0	4.9	1.8	22.0	631.0	74.0	31.0	222.0	107.0	24.0	12.0		
29	13.0	12.0	4.5	2.1	31.0	997.0	68.0	34.0	143.0	84.0	24.0	13.0		
30	13.0	4.5	4.5	2.0	67.0	737.0	111.0	53.0	96.0	62.0	24.0	13.0		
31	13.0	4.5	4.5	4.9	49.0	84.0	84.0	92.0	51.0	51.0	51.0	13.0		
MEAN	13.74	11.04	7.89	3.09	12.32	734.17	522.32	71.26	146.63	194.52	79.27	15.94		
INCHES	0.161	0.121	0.092	0.035	0.144	8.299	6.101	0.832	1.657	2.272	0.896	0.186		
STA AV	0.401	0.473	0.805	0.188	0.307	2.041	2.133	2.019	2.901	2.018	2.272	0.152		

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by .0003768. Discharge is combined flow from Williamson Ditch and S-1 structure. Runoff data furnished by the U.S. Geological Survey. Discharge measurements generally made once a week.

1969 MEAN DAILY DISCHARGE (cfs) VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	12.0	14.0	8.2	32.0	17.0	23.0	47.0	61.0	61.0	115.0	1560.0	112.0
2	12.0	14.0	8.2	37.0	20.0	20.0	39.0	47.0	40.0	226.0	966.0	72.0
3	11.0	14.0	9.0	68.0	102.0	20.0	37.0	51.0	46.0	1900.0	453.0	71.0
4	17.0	15.0	9.8	52.0	458.0	19.0	42.0	65.0	40.0	2240.0	316.0	67.0
5	32.0	15.0	11.0	40.0	266.0	17.0	201.0	105.0	36.0	1730.0	214.0	53.0
6	87.0	15.0	11.0	32.0	120.0	29.0	134.0	107.0	35.0	892.0	159.0	47.0
7	60.0	15.0	14.0	23.0	67.0	83.0	81.0	84.0	48.0	364.0	110.0	45.0
8	44.0	14.0	32.0	19.0	41.0	44.0	49.0	201.0	60.0	228.0	103.0	48.0
9	36.0	16.0	1920.0	15.0	31.0	37.0	40.0	439.0	82.0	146.0	87.0	46.0
10	30.0	15.0	2290.0	19.0	28.0	28.0	30.0	456.0	517.0	103.0	84.0	452.0
11	27.0	14.0	847.0	21.0	21.0	29.0	26.0	1170.0	624.0	78.0	67.0	794.0
12	27.0	15.0	321.0	19.0	63.0	56.0	22.0	1060.0	325.0	59.0	55.0	447.0
13	26.0	17.0	209.0	18.0	157.0	570.0	21.0	957.0	169.0	42.0	50.0	223.0
14	24.0	16.0	148.0	17.0	138.0	1250.0	21.0	1390.0	121.0	28.0	633.0	152.0
15	21.0	23.0	108.0	17.0	565.0	2360.0	25.0	1280.0	104.0	27.0	1180.0	116.0
16	21.0	30.0	114.0	17.0	399.0	1970.0	37.0	999.0	109.0	41.0	697.0	93.0
17	21.0	24.0	2050.0	29.0	211.0	2250.0	26.0	646.0	100.0	37.0	397.0	94.0
18	20.0	19.0	1660.0	24.0	123.0	1400.0	33.0	419.0	162.0	39.0	270.0	58.0
19	20.0	16.0	719.0	20.0	82.0	760.0	185.0	488.0	283.0	111.0	190.0	55.0
20	23.0	14.0	260.0	18.0	492.0	1520.0	168.0	342.0	173.0	224.0	138.0	46.0
21	21.0	12.0	174.0	19.0	388.0	1900.0	253.0	231.0	113.0	181.0	105.0	37.0
22	20.0	12.0	138.0	17.0	201.0	1090.0	166.0	158.0	84.0	131.0	102.0	53.0
23	27.0	11.0	96.0	16.0	112.0	350.0	86.0	162.0	70.0	133.0	64.0	30.0
24	9.8	11.0	66.0	15.0	72.0	230.0	54.0	113.0	133.0	1170.0	60.0	35.0
25	18.0	9.8	57.0	15.0	46.0	147.0	39.0	111.0	338.0	972.0	63.0	33.0
26	18.0	9.8	89.0	14.0	18.0	102.0	27.0	451.0	190.0	563.0	58.0	33.0
27	18.0	9.0	79.0	13.0	30.0	69.0	23.0	301.0	120.0	340.0	55.0	31.0
28	14.0	8.7	62.0	15.0	28.0	59.0	43.0	191.0	89.0	243.0	237.0	29.0
29	9.7		48.0	27.0	32.0	46.0	141.0	149.0	127.0	659.0	236.0	27.0
30	8.4		41.0	22.0	32.0	44.0	74.0	110.0	145.0	1560.0	188.0	24.0
31	9.0		35.0		25.0		67.0	80.0		1320.0		25.0
MEAN	24.00	14.94	375.30	23.67	141.45	550.73	72.16	400.77	151.47	512.97	296.57	111.23
INCHES	0.280	0.158	4.384	0.268	1.652	6.225	0.843	4.681	1.712	5.992	3.352	1.299
STA AV	0.393	0.452	1.044	0.193	0.397	2.320	2.053	2.196	2.827	2.266	2.339	0.224

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by .0003768. Discharge is combined flow from Williamson Ditch and S-1 structure. Runoff data furnished by the U.S. Geological Survey. Discharge measurements generally made once a week.

VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-3

LOCATION: Okeechobee County, Florida. Runoff gaging site is approximately 11 mi. (airline) W-WW of City of Okeechobee on State Road #68. Northern reach of Taylor Creek Watershed.

AREA: 10050.00 acres 15.70 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-3	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1968	P	0.37	1.44	0.64	0.26	7.22	12.46	10.19	4.28	3.94	5.35	2.58	0.14	48.89
	Q	0.072	0.057	0.041	0.003	0.018	5.373	8.820	2.015	0.553	1.522	1.161	0.132	19.767
1969	P	1.85	1.25	8.30	2.56	5.12	5.69	4.57	10.59	4.10	9.66	3.05	1.58	58.32
	Q	0.232	0.114	3.533	0.350	1.227	4.860	0.517	4.758	0.643	5.244	3.161	0.728	25.367
STA AV	P	1.75	2.29	3.25	2.49	4.23	7.76	6.86	6.66	5.92	4.28	1.24	1.53	48.25
	Q	0.350	0.297	0.966	0.171	0.291	1.670	1.957	2.103	2.647	1.945	1.294	0.150	13.842

NOTES: Watershed conditions: 1968: Improved pasture, 45%; range & forest, 45%; cropland, 0%; miscellaneous, 10%. 1969: Improved pasture, 48%; range & forest, 41%; cropland, 1%; miscellaneous, 10%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p.8-2-5. Precipitation and runoff records began July 1955. Precipitation Thiessen weighted using 2 gages. Runoff data furnished by U.S. Geological Survey. For long-time precipitation records, see U.S. Weather Bureau records at Okeechobee Hurricane Gate 6, Florida.

1968 DAILY PRECIPITATION (inches)													VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-3	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.24	1.48	0.11	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	3.12	0.04	0.11	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.24	1.46	0.34	0.75	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.06	0.0	0.0	0.01	1.21	0.41	0.0	0.06	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.54	0.01	0.0	0.0	1.93	0.0	0.09	0.0	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.04	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.26	0.49	0.46	0.19	0.04	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.02	0.19	0.51	0.14	0.36	0.01	1.67	0.0	0.0	
10	0.23	0.0	0.0	0.0	0.0	0.21	0.62	0.53	0.04	0.0	0.01	0.0	0.0	
11	3.0	0.12	0.0	0.10	0.04	0.89	0.0	0.0	0.85	0.0	0.81	0.0	0.0	
12	0.0	0.0	0.10	0.0	0.11	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	
13	0.02	0.0	0.0	0.0	0.0	1.17	0.0	0.58	0.47	0.0	0.00	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.14	0.0	0.02	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.12	0.30	0.18	0.0	0.07	0.0	1.86	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.10	0.52	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.14	0.16	0.0	0.54	0.0	1.13	0.0	0.0	0.0	
18	0.0	0.08	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	
19	0.0	0.82	0.0	0.0	0.49	0.14	0.02	0.0	0.85	1.32	0.07	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.30	0.72	0.0	0.12	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.0	0.04	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.30	0.0	0.0	0.36	0.0	0.0	0.40	0.02	0.64	0.0	0.0	0.02	
24	0.10	0.0	0.0	0.0	1.90	0.0	0.0	0.01	0.02	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	1.45	0.51	0.0	0.0	0.42	0.22	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.57	1.05	0.09	0.07	0.26	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.04	0.05	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.45	1.06	0.0	0.02	0.01	0.01	0.0	0.0	0.13	
29	0.0	0.07	0.0	0.0	1.08	0.17	0.44	0.12	0.0	0.0	0.03	0.0	0.0	
30	0.02	0.0	0.0	0.0	0.0	0.02	0.0	0.23	0.0	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.00	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.37	1.44	0.64	0.26	7.22	12.46	10.19	4.28	3.94	5.35	2.58	0.14		
STA AV	1.74	2.36	2.89	2.48	4.17	7.91	7.01	6.40	6.04	3.92	1.12	1.53		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-2, p. 08.002-1. Thiessen weighted average of 2 rain gages. STA AV based on period July 1, 1955 through 1968.

1969	DAILY PRECIPITATION (inches)					VERO BEACH, FLORIDA (TAYLOR CREEK)					WATERSHED W-3	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.19	0.0	0.30	0.0	0.0
2	0.0	0.0	0.0	0.61	0.16	0.0	0.07	0.02	0.14	3.39	0.0	0.0
3	0.0	0.0	0.60	0.0	1.09	0.0	0.0	0.40	0.0	0.82	0.0	0.0
4	0.86	0.0	0.0	0.0	0.0	0.17	0.27	1.40	0.0	0.0	0.01	0.0
5	0.71	0.0	0.0	0.03	0.0	0.12	0.0	0.0	0.01	0.17	0.0	0.0
6	0.0	0.0	0.42	0.01	0.0	0.0	0.0	0.39	0.21	0.02	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.01	0.08	0.21	0.27	0.01	0.0	0.15
8	0.0	0.15	4.01	0.0	0.0	0.08	0.0	1.19	0.0	0.00	0.0	0.02
9	0.0	0.13	0.51	0.0	0.0	0.0	0.0	0.01	0.19	0.0	0.05	0.03
10	0.0	0.0	0.0	0.0	0.10	0.03	0.0	2.05	0.0	0.0	0.0	1.24
11	0.21	0.0	0.0	0.0	0.0	0.66	0.0	0.11	0.05	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.85	0.46	0.0	1.04	0.0	0.0	0.0	0.0
13	0.0	0.0	0.08	0.0	0.0	0.28	0.17	1.26	0.08	0.0	1.13	0.0
14	0.0	0.0	0.0	0.0	1.45	0.40	0.11	0.06	0.0	0.0	1.24	0.0
15	0.0	0.98	0.0	0.0	0.07	0.0	0.04	0.25	0.34	0.0	0.0	0.0
16	0.0	0.0	1.90	1.10	0.0	1.69	0.68	0.37	0.34	0.0	0.0	0.0
17	0.0	0.0	0.13	0.0	0.19	0.05	0.0	0.07	0.0	0.09	0.0	0.0
18	0.00	0.0	0.02	0.0	0.0	0.0	1.73	0.51	0.94	0.84	0.0	0.0
19	0.01	0.0	0.0	0.01	0.02	0.56	0.49	0.01	0.0	0.66	0.0	0.0
20	0.01	0.0	0.0	0.0	0.83	0.86	0.59	0.0	0.10	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.06	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.02	0.06	0.0	0.08
23	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.25	0.11	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.76	0.04	0.0
25	0.0	0.0	0.62	0.0	0.0	0.0	0.0	0.91	0.0	0.07	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.10	0.06	0.07
27	0.02	0.0	0.0	0.0	0.0	0.0	0.04	0.09	0.0	0.0	0.23	0.0
28	0.03	0.0	0.0	0.80	0.33	0.0	0.18	0.0	0.15	0.04	0.29	0.0
29	0.0	0.0	0.0	0.0	0.03	0.11	0.01	0.0	0.44	1.07	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.33	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.01	0.0	0.82	0.0	0.0
TOTAL	1.85	1.25	8.30	2.56	5.12	5.69	4.57	10.59	4.10	9.66	3.05	1.58
STA AV	1.75	2.29	3.25	2.49	4.23	7.76	6.86	6.66	5.92	4.28	1.24	1.53

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-2, p. 08.002-2. Thiessen weighted average of 2 rain gages. STA AV based on period July 1, 1955 through 1969.

1968	MEAN DAILY DISCHARGE (cfs)					VERO BEACH, FLORIDA (TAYLOR CREEK)					WATERSHED W-3	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.6	0.7	0.7	0.2	0.0	2.0	74.0	20.0	6.0	5.4	7.9	4.1
2	2.2	0.7	0.7	0.2	0.0	1.8	240.0	16.0	5.0	4.8	7.2	3.8
3	2.2	0.7	0.7	0.1	0.0	7.1	245.0	20.0	4.4	4.3	6.6	3.4
4	1.8	0.7	0.7	0.1	0.0	102.0	131.0	28.0	4.0	3.7	5.9	3.2
5	1.4	0.7	0.8	0.1	0.0	166.0	89.0	38.0	3.6	3.4	5.4	3.0
6	1.4	0.6	0.8	0.1	0.0	155.0	200.0	25.0	3.2	3.4	4.8	2.8
7	1.0	0.6	1.0	0.1	0.0	62.0	751.0	18.0	3.0	3.3	4.3	2.6
8	1.0	0.7	1.0	0.1	0.0	52.0	289.0	17.0	2.9	3.2	3.8	2.4
9	0.7	0.6	1.0	0.1	0.0	40.0	216.0	19.0	3.4	3.0	6.6	2.0
10	0.7	0.6	0.8	0.1	0.0	34.0	206.0	32.0	4.4	3.2	61.0	2.0
11	0.8	0.7	0.8	0.1	0.0	60.0	143.0	30.0	3.8	0.0	58.0	1.8
12	0.8	0.7	0.8	0.0	0.0	87.0	90.0	19.0	9.4	0.0	90.0	1.6
13	0.9	0.7	0.8	0.0	0.0	57.0	65.0	15.0	11.0	0.1	48.0	1.6
14	0.9	0.7	0.7	0.0	0.0	78.0	61.0	42.0	17.0	0.8	32.0	1.4
15	0.8	0.7	0.6	0.0	0.0	45.0	54.0	63.0	15.0	3.2	24.0	1.4
16	0.7	0.7	0.6	0.0	0.0	46.0	60.0	54.0	12.0	14.0	20.0	1.4
17	0.7	0.7	0.6	0.0	0.0	40.0	62.0	43.0	8.0	39.0	16.0	1.2
18	0.7	0.6	0.6	0.0	0.0	35.0	42.0	54.0	5.7	47.0	13.0	1.2
19	0.7	1.6	0.5	0.0	0.0	42.0	33.0	60.0	9.8	90.0	11.0	1.2
20	0.7	1.6	0.5	0.0	0.0	58.0	30.0	44.0	16.0	92.0	9.3	1.2
21	0.7	1.2	0.4	0.0	0.0	137.0	147.0	39.0	9.8	54.0	7.2	1.2
22	0.7	1.0	0.3	0.0	0.0	91.0	171.0	26.0	6.4	38.0	7.0	1.2
23	0.6	1.0	0.3	0.0	0.0	59.0	80.0	21.0	4.9	32.0	6.2	1.2
24	0.6	1.0	0.3	0.0	0.0	46.0	53.0	21.0	4.2	44.0	5.9	1.4
25	0.7	1.0	0.3	0.0	0.0	38.0	40.0	19.0	8.0	40.0	5.6	1.2
26	0.7	1.0	0.2	0.0	0.1	87.0	30.0	17.0	11.0	36.0	5.1	1.0
27	0.7	1.0	0.2	0.0	0.5	113.0	26.0	15.0	13.0	20.0	4.8	1.0
28	0.7	0.8	0.2	0.0	0.4	111.0	21.0	12.0	12.0	18.0	4.6	0.9
29	0.7	0.8	0.2	0.0	0.7	268.0	22.0	9.8	9.8	15.0	4.6	1.0
30	0.7	0.8	0.2	0.0	3.4	149.0	32.0	7.5	6.7	12.0	4.3	1.2
31	0.7	0.8	0.2	0.0	2.4	149.0	21.0	6.7	6.7	9.7	4.3	1.2
MEAN	0.97	0.83	0.56	0.04	0.24	75.63	120.13	27.13	7.78	20.73	16.34	1.80
INCHES	0.072	0.057	0.041	0.003	0.018	5.373	8.820	2.015	0.553	1.522	1.161	0.132
STA AV	0.358	0.311	0.783	0.158	0.224	1.442	2.053	1.926	2.781	1.725	1.169	0.111

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by .002368. Runoff data furnished by U.S. Geological Survey.

1969 MEAN DAILY DISCHARGE (cfs) VERO BEACH, FLORIDA (TAYLOR CREEK) WATERSHED W-3												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.2	1.4	1.0	11.0	2.6	5.2	12.0	3.2	13.0	8.1	212.0	10.0
2	1.6	1.2	1.0	12.0	2.2	4.5	11.0	3.2	12.0	69.0	100.0	8.9
3	1.8	1.2	1.2	15.0	8.8	4.1	9.7	3.0	10.0	684.0	67.0	8.1
4	2.8	1.0	2.2	7.1	65.0	3.6	8.6	3.8	9.5	290.0	49.0	7.2
5	5.4	0.9	2.0	7.9	33.0	3.6	8.1	17.0	8.9	116.0	38.0	6.5
6	9.7	0.9	1.8	7.2	17.0	3.4	7.5	14.0	8.6	78.0	29.0	5.9
7	7.5	0.8	2.4	5.9	8.9	3.0	7.0	17.0	11.0	53.0	24.0	5.7
8	5.9	0.9	11.0	5.1	5.9	2.7	6.2	24.0	10.0	39.0	20.0	6.2
9	4.8	1.6	280.0	4.6	4.3	2.5	5.4	56.0	8.9	29.0	17.0	5.7
10	4.1	1.8	170.0	4.1	4.0	2.2	4.9	42.0	7.8	22.0	16.0	28.0
11	4.1	1.6	73.0	3.8	3.8	2.2	4.7	245.0	7.5	18.0	14.0	52.0
12	4.3	1.6	45.0	3.2	3.8	21.0	4.5	154.0	6.7	15.0	12.0	29.0
13	4.1	1.4	35.0	2.4	7.0	123.0	4.3	233.0	6.2	13.0	12.0	19.0
14	3.6	1.2	26.0	2.8	16.0	126.0	4.3	338.0	5.9	11.0	193.0	15.0
15	3.4	1.8	21.0	2.8	66.0	111.0	4.3	150.0	5.4	9.5	169.0	12.0
16	3.2	3.6	48.0	2.6	40.0	128.0	4.3	138.0	5.7	8.3	80.0	11.0
17	2.8	3.6	312.0	14.0	26.0	600.0	4.3	99.0	5.7	7.2	55.0	9.2
18	2.8	3.0	123.0	6.6	18.0	180.0	6.1	76.0	12.0	8.3	40.0	8.1
19	2.6	2.8	68.0	4.1	14.0	87.0	13.0	61.0	15.0	19.0	31.0	7.2
20	2.4	2.6	47.0	3.4	36.0	119.0	12.0	51.0	9.5	41.0	24.0	6.2
21	2.4	2.4	35.0	2.6	35.0	214.0	18.0	40.0	7.2	31.0	19.0	5.7
22	2.2	2.2	21.0	2.4	24.0	95.0	13.0	32.0	5.9	26.0	16.0	5.4
23	2.0	2.0	27.0	1.8	16.0	57.0	10.0	27.0	5.2	22.0	14.0	5.2
24	2.0	1.8	18.0	1.8	12.0	40.0	7.2	22.0	13.0	74.0	13.0	4.7
25	1.8	1.4	17.0	1.4	9.2	30.0	5.4	22.0	19.0	61.0	12.0	4.5
26	2.0	1.2	24.0	1.4	7.5	24.0	4.3	34.0	10.0	46.0	11.0	4.3
27	1.8	1.2	22.0	1.2	6.2	18.0	3.8	30.0	7.0	39.0	9.7	4.3
28	1.6	1.2	17.0	1.4	5.9	16.0	3.6	24.0	5.2	31.0	12.0	4.1
29	1.4		15.0	4.8	7.0	13.0	3.8	19.0	8.6	70.0	14.0	4.1
30	1.4		13.0	3.4	6.7	13.0	3.8	16.0	11.0	119.0	12.0	1.4
31	1.2		12.0		6.2		3.4	15.0		157.0		2.6
MEAN	3.16	1.72	48.11	4.93	16.71	68.40	7.05	64.81	9.05	71.43	44.49	9.91
INCHES	0.232	0.114	3.533	0.350	1.227	4.860	0.517	4.758	0.643	5.244	3.161	0.728
STA AV	0.350	0.297	0.966	0.171	0.291	1.670	1.957	2.103	2.647	1.945	1.294	0.150

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by .002368. Runoff data furnished by U.S. Geological Survey.

WATKINSVILLE, GEORGIA WATERSHED W-1 (10001)

LOCATION: Oconee Co., Ga.; 7 mi. S.W. of Athens, near Watkinsville, Ga., Oconee River Basin.

AREA: 19.20 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														WATKINSVILLE, GEORGIA WATERSHED W-1 (10001)															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	5.17	3.40	5.02	5.37	4.87	2.70	1.05	8.67	6.77	2.45	2.74	4.28	52.49															
	Q	1.433	0.002	0.203	0.153	0.045	0.0	0.0	0.110	0.142	0.0	0.0	0.019	2.107															
STA AV	P	4.81	4.71	5.88	4.55	3.87	3.80	5.03	3.91	3.13	2.81	3.61	4.57	50.69															
	Q	0.506	0.401	0.623	0.464	0.397	0.234	0.409	0.344	0.030	0.067	0.316	0.245	4.036															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		1-20	0.354	1-20	0.335	1-20	0.551	1-20	1.228	1-19	1.495	1-19	1.511	1-19	1.511	1-19	1.511	1-19	1.511										
MAXIMUMS FOR PERIOD OF RECORD																													
		4-25	2.710	6-26	1.840	6-26	2.540	6-26	3.480	6-26	3.740	6-26	3.780	11-26	5.680	11-22	6.640												
		1945		1963		1963		1963		1963		1963		1948		1948													

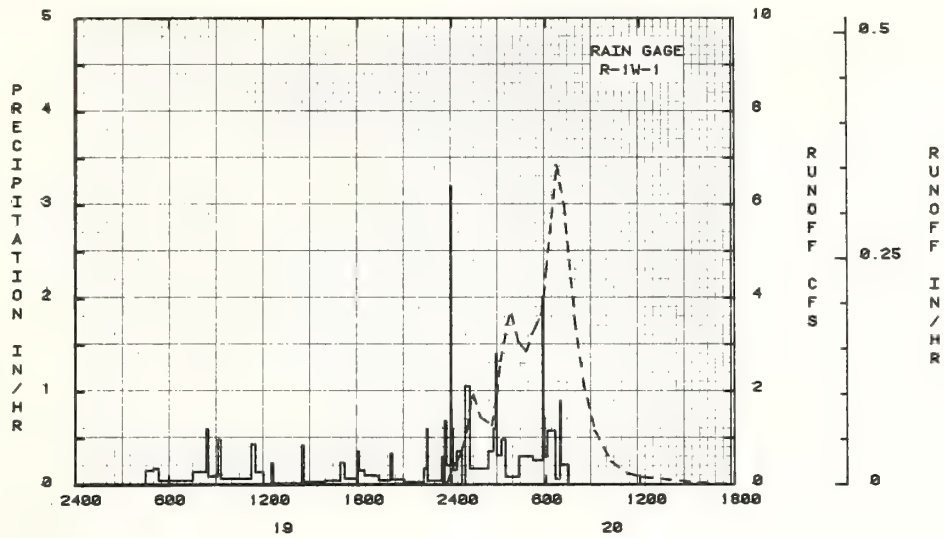
NOTES: Watershed conditions: 1969: excellent coastal bermudagrass pasture; 1256 cow-days grazing by beef cattle; wild barley and winter weeds were grazed in Jan. and Feb. Fertilized 6/10 4500 lbs N (234 lbs/ac) and 8/14 2300 lbs P (120 lbs/ac). For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Hisc. Pub. 945, p. 10.1-8. P and Q records began Sept. 1, 1939. For long-time precipitation records, see U.S. Weather Bureau records at Athens, Ga. (1885-1939) and Southern Piedmont Conservation Research Center (1940 to date).

1969 DAILY AIR TEMPERATURE (degrees F)														WATKINSVILLE, GEORGIA WATERSHED W-1 (10001)													
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min			
1	37	22	65	55	52	36	73	31	71	48	91	62	95	68	87	68	76	68	72	57	65	58	59	36			
2	42	23	66	60	57	27	78	47	72	43	84	64	95	68	90	68	83	79	75	57	71	51	56	25			
3	48	33	62	32	46	30	82	47	70	51	78	52	96	69	76	69	84	70	85	55	63	40	58	38			
4	43	21	50	28	53	30	83	51	80	47	76	48	97	68	77	64	85	70	79	59	56	36	48	23			
5	39	12	58	33	55	25	70	62	80	46	75	58	97	70	88	64	86	68	70	58	55	35	45	19			
6	40	10	46	41	42	36	78	55	83	48	87	59	98	72	90	65	86	69	72	58	65	37	40	35			
7	47	27	64	42	55	32	73	41	84	52	92	66	94	73	89	64	89	64	78	52	72	40	48	37			
8	57	22	51	41	65	30	75	36	75	62	91	63	96	73	92	66	88	68	73	62	68	38	46	33			
9	66	34	50	31	50	32	75	47	69	54	92	64	84	73	93	68	83	63	75	56	70	34	46	33			
10	45	23	55	23	45	27	69	56	73	45	80	64	95	73	90	70	76	51	77	55	68	39	46	42			
11	47	21	57	31	64	23	80	51	66	48	86	64	98	71	89	65	75	53	82	53	74	34	57	41			
12	49	16	54	30	53	23	70	49	75	39	87	64	97	73	86	64	79	53	85	57	68	45	47	30			
13	50	21	52	21	52	27	65	54	82	50	89	69	98	71	78	68	82	52	83	59	51	34	55	38			
14	51	17	45	25	57	28	59	51	70	55	88	70	95	70	84	68	81	54	84	58	44	25	61	40			
15	53	23	37	29	60	38	67	59	65	59	85	69	92	73	84	68	82	53	62	54	42	18	50	34			
16	53	21	33	29	55	41	78	59	73	61	89	67	93	66	87	72	82	64	69	53	60	21	51	24			
17	50	36	37	33	64	33	80	56	72	63	76	65	94	65	88	70	86	70	69	44	58	27	54	22			
18	64	44	46	31	55	45	81	61	73	64	90	68	95	65	87	73	91	66	68	36	68	52	56	21			
19	60	51	57	28	73	43	65	49	80	64	90	69	98	68	89	73	72	59	72	46	63	29	58	35			
20	60	37	58	24	75	37	67	41	86	63	86	66	94	72	89	72	64	58	76	65	55	28	48	25			
21	51	38	58	26	68	43	71	40	85	61	93	66	92	68	89	68	65	60	77	53	59	32	37	23			
22	57	43	39	32	66	30	70	44	84	63	94	65	90	73	74	58	66	61	75	48	63	28	43	30			
23	53	46	53	35	63	34	68	41	87	62	91	68	88	69	78	60	65	62	61	40	60	32	44	24			
24	66	45	51	32	78	52	70	37	86	58	93	69	91	69	82	57	80	65	57	37	71	42	78	50			
25	55	33	59	30	56	40	74	38	86	61	95	69	96	68	83	58	82	60	66	49	62	40	36	28			
26	56	23	57	28	52	34	79	40	82	63	97	68	93	71	90	61	83	51	77	51	67	34	43	30			
27	42	33	61	25	55	28	80	46	78	58	98	69	94	72	85	64	85	57	77	47	63	32	44	29			
28	34	31	52	30	67	26	75	54	82	57	100	70	92	71	82	60	82	56	65	45	57	36	66	26			
29	42	33			72	43	74	51	88	56	100	69	91	68	82	55	73	55	58	38	60	30	63	37			
30	68	39			68	44	74	42	90	61	93	69	92	63	82	57	66	51	62	38	54	30	70	57			
31	66	53			65	31			91	62			93	66	80	70			66	52			57	37			
AV.	51	30	52	32	59	33	73	47	78	55	88	65	94	69	85	65	79	61	72	51	61	35	52	32			
MEAN	40.7		42.5		46.6		60.7		67.2		77.0		81.9		75.3		70.2		62.0		48.5		42.2				
STA AV	51	30	52	32	59	33	73	47	78	55	88	65	94	69	85	65	79	61	72	51	61	35	52	32			

NOTES: STA AV based on 1 year (1969) data only.

1969 SELECTED RUNOFF EVENT			WATKINSVILLE, GEORGIA WATERSHED W-1 (10001)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JANUARY 19 - 21, 1969										
RG R-1W-1			RG R-1W-1							
1-19	0.0	0.0	1-19	430	0.0	0.0	1-19	1735	0.0	0.0
				500	0.1600	0.08		1803	0.0	0.0
				520	0.1800	0.14		1828	0.010	0.0002
				730	0.0508	0.25		1850	0.010	0.0005
				823	0.1472	0.38		1922	0.020	0.0009
WATERSHED CONDITIONS:				830	0.5998	0.45		2021	0.030	0.0021
Dormant Coastal Bermudagrass				907	0.0973	0.51		2118	0.010	0.0029
pasture. Excellent ground				918	0.4909	0.60		2158	0.0	0.0030
cover.				1115	0.0718	0.74		2211	0.0	0.0030
30 Day Antecedent Conditions:				1130	0.4400	0.85		2332	0.010	0.0033
Date	Rainfall	Runoff		1200	0.1400	0.92		2344	0.060	0.0037
12-20	0.00	0.0000		1233	0.0	0.92		2351	0.170	0.0044
12-21	0.40	0.0000		1238	0.2395	0.94		2356	0.240	0.0053
12-22	1.93	0.0598		1428	0.0218	0.98		2400	0.340	0.0063
12-28	0.64	0.0038		1435	0.4284	1.03	1-20	10	0.440	0.0096
12-30	0.15	0.0000		1555	0.0375	1.08		20	0.500	0.0136
12-31	0.23	0.0000		1655	0.0500	1.13		40	0.740	0.0243
01-18	0.04	0.0000		1710	0.2400	1.19		100	1.190	0.0409
				1800	0.0720	1.25		117	1.860	0.0632
				1805	0.3603	1.28		124	1.930	0.0746
				1828	0.1565	1.34		150	1.450	0.1125
				1902	0.1059	1.40		233	1.270	0.1628
				1920	0.1000	1.43		254	1.940	0.1918
				2005	0.0533	1.47		307	2.650	0.2175
				2012	0.3428	1.51		340	3.620	0.3066
				2100	0.0625	1.56		349	3.650	0.3348
				2215	0.0320	1.60		415	3.060	0.4099
				2225	0.1802	1.63		444	2.850	0.4838
				2228	0.5994	1.66		518	3.370	0.5747
				2322	0.0444	1.70		544	3.650	0.6533
				2328	0.2997	1.73		602	4.580	0.7171
				2333	0.0	1.73		623	5.730	0.8104
				2340	0.6855	1.81		643	6.850	0.9187
				2357	0.2117	1.87		711	5.980	1.0733
				2400	3.1998	2.03		730	4.810	1.1616
			1-20	5	0.6006	2.08		751	3.520	1.2369
				20	0.1600	2.12		822	2.230	1.3136
				40	0.3601	2.24		908	1.150	1.3804
				52	0.0	2.24		1010	0.490	1.4241
				109	1.0584	2.54		1113	0.240	1.4440
				220	0.1775	2.75		1210	0.160	1.4538
				240	0.3601	2.87		1543	0.040	1.4719
				249	0.5994	2.96		2400	0.0	1.4811
				252	1.4000	3.03	1-21	400	0.0	1.4814
				309	0.3175	3.12				
				325	0.4876	3.25				
				415	0.0840	3.32				
				510	0.3055	3.60				
				547	0.2594	3.76				
				550	2.0000	3.86				
				555	0.7207	3.92				
				605	0.2999	3.97				
				635	0.5800	4.26				
				653	0.0667	4.28				
				657	0.9002	4.34				
				725	0.2143	4.44				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.051653.



EVENT OF JANUARY 19 - 21, 1969
WATKINSVILLE, GEORGIA WATERSHED W-1 (10001)

BLACKSBURG, VIRGINIA CRAB CREEK WATERSHED (13007)

LOCATION: Montgomery County, Va., 2 mi. W. of Christiansburg, Va., New River.

AREA: 786.00 acres 1.23 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														BLACKSBURG, VIRGINIA CRAB CREEK WATERSHED (13007)											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	1.83	2.85	2.44	1.63	1.14	3.00	4.19	2.39	4.57	2.27	1.24	4.75	32.30											
	Q	0.296	0.499	0.495	0.281	0.195	0.191	0.214	0.092	0.118	0.111	0.124	0.262	2.879											
STA AV	P	2.22	2.61	3.16	2.63	2.92	2.48	3.60	3.48	3.10	2.68	2.24	2.89	34.01											
	Q	0.669	0.725	1.093	0.805	0.538	0.283	0.254	0.290	0.211	0.231	0.237	0.431	5.767											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.						
1969		7- 6	0.011	7- 6	0.008	7- 6	0.011	2- 2	0.026	2- 2	0.044	2- 2	0.068	2- 1	0.099	2- 1	0.240								
MAXIMUMS FOR PERIOD OF RECORD																									
		8-21	0.230	3-13	0.150	3-13	0.230	3-13	0.360	4- 3	0.420	4- 3	0.520	4- 3	0.730	3-27	1.760								
		1966		1967		1967		1967		1960		1960		1960		1960									

NOTES: Watershed conditions: Cultivated, alfalfa and other hay crops, 28%; row crop, 10%; permanent pasture, usually good cover of native bluegrass combined with other grasses and clovers, 43%; farm woods predominately hard wood, 13%; idle, 5%; roads, 1%. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 13.7-5. Precipitation Thiessen weighted from rain gages R-1, R-2, R-3, and R-4. Station average precipitation determined from record period from August 1957 through 1969. For long-time precipitation records, see U.S. Weather Bureau records for Blacksburg, Virginia.

1969	DAILY PRECIPITATION (inches)					BLACKSBURG, VIRGINIA				CRAB CREEK WATERSHED (13007)			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.49	0.79S	0.0	0.0	0.06	0.54	0.02E	0.16	0.0	0.57	0.0	
2	0.0	0.69E	0.0	0.03E	0.0	0.21	0.0	0.13	0.96	0.53	0.00E	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.01	0.03	0.08	0.12	0.0	0.0	0.00S	
4	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.17	0.61	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.03	0.0	0.02S	0.0	
6	0.0	0.23N	0.25S	0.01	0.0	0.0	1.11	0.0	0.0	0.0	0.0	0.0	
7	0.0	0.09E	0.25S	0.0	0.0	0.08E	0.53	0.0	0.46	1.02	0.0	0.67E	
8	0.0	0.53N	0.01N	0.0	0.02	0.08	0.0	0.12	0.12	0.57	0.0	0.0	
9	0.0	0.06N	0.17N	0.0	0.20	0.85	0.0	0.0	0.0	0.0	0.02E	0.0	
10	0.0	0.0	0.0	0.32E	0.10E	0.0	0.50	0.20E	0.0	0.0	0.0	1.28	
11	0.0	0.0	0.0	0.0	0.03E	0.0	0.64	0.0	0.0	0.0	0.03	0.01	
12	0.0	0.0	0.0	0.0	0.09E	0.12	0.01E	0.0	0.0	0.0	0.06	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08S	0.0	
14	0.0	0.0	0.0	0.14	0.02E	0.19	0.0	0.00	0.0	0.0	0.01S	0.04N	
15	0.0	0.0	0.0	0.22	0.0	0.36	0.0	0.07	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.13	0.0	0.03	0.0	0.35	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.39	0.0	0.0	0.0	
18	0.31	0.0	0.39	0.19	0.14E	0.01	0.34	0.07	0.03	0.0	0.0	0.04N	
19	0.23	0.0	0.0	0.19	0.19E	0.0	0.0	0.41	0.39	0.0	0.40	0.0	
20	0.75	0.0	0.0	0.00	0.0	0.0	0.01	0.72	1.29	0.0	0.0	0.0	
21	0.31E	0.0	0.00	0.09	0.0	0.14	0.02	0.0	0.00	0.12E	0.0	0.09E	
22	0.00	0.09S	0.0	0.02	0.0	0.10	0.39	0.0	0.00	0.0	0.0	0.13E	
23	0.00	0.39S	0.00	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.03S	
24	0.0	0.0	0.58	0.0	0.0	0.59	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.00	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.04	1.11S	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.10S	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28	0.04N	0.29S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.06E		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87	
31	0.13		0.0		0.35		0.0	0.0		0.02		0.01	
TOTAL	1.83	2.85	2.44	1.63	1.14	3.00	4.19	2.39	4.57	2.27	1.24	4.75	
STA AV	2.22	2.61	3.16	2.63	2.92	2.48	3.60	3.48	3.10	2.68	2.24	2.89	

NOTES: Precipitation amounts are Thiessen weighted values from rain gages R-1, R-2, R-3, and R-4. STA AV based on record period August 1957 through 1969.

1969	MEAN DAILY DISCHARGE (cfs)					BLACKSBURG, VIRGINIA			CRAB CREEK WATERSHED (13007)			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.182E	0.852E	0.308E	0.341	0.222	0.193	0.317	0.101	0.087	0.102	0.181	0.101
2	0.270E	2.105E	0.322E	0.381	0.222	0.222	0.281	0.098	0.168	0.156	0.149	0.111
3	0.135E	1.175E	0.327E	0.308	0.222	0.204	0.235	0.098	0.128	0.146	0.127	0.117
4	0.127E	0.657E	0.359E	0.345	0.222	0.190	0.222	0.108	0.183	0.146	0.127	0.127
5	0.233E	0.600E	0.414E	0.351	0.222	0.190	0.197	0.111	0.123	0.127	0.135	0.122
6	0.217E	0.656E	0.516E	0.342	0.222	0.190	0.867	0.111	0.111	0.122	0.159	0.113
7	0.174E	0.714E	0.572E	0.321	0.222	0.190	0.456	0.111	0.112	0.113	0.159	0.136
8	0.233E	0.839E	0.731E	0.301	0.222	0.190	0.317	0.111	0.155	0.117	0.159	0.127
9	0.155E	1.261E	1.167E	0.301	0.230	0.275	0.205	0.098	0.111	0.111	0.159	0.108
10	0.127E	0.679E	1.003E	0.330	0.222	0.231	0.320	0.108	0.111	0.111	0.159	0.426
11	0.155E	0.626E	0.679E	0.325	0.222	0.206	0.679	0.088	0.111	0.111	0.159	0.233
12	0.159E	0.558E	0.566E	0.301	0.222	0.190	0.375	0.087	0.111	0.111	0.159	0.135
13	0.159E	0.420E	0.557E	0.301	0.222	0.190E	0.202	0.087	0.111	0.111	0.159	0.113
14	0.159E	0.407E	0.533E	0.301	0.222	0.190E	0.160	0.087	0.111	0.111	0.159	0.111
15	0.159E	0.388E	0.517E	0.332	0.222	0.245E	0.159	0.087	0.111	0.111	0.159	0.111
16	0.159E	0.388E	0.502E	0.362	0.206	0.230E	0.137	0.104	0.111	0.111	0.159	0.111
17	0.152E	0.382E	0.489E	0.313	0.190	0.190	0.127	0.111	0.113	0.111	0.138	0.111
18	0.165E	0.381E	0.525E	0.303	0.193	0.190	0.132	0.092	0.121	0.111	0.127	0.111
19	0.222E	0.337E	0.773E	0.354	0.222	0.190	0.159	0.091	0.120	0.111	0.165	0.111
20	0.286E	0.329E	0.536E	0.302	0.206	0.190	0.137	0.181	0.385	0.111	0.132	0.111
21	1.232E	0.315E	0.478E	0.301	0.190	0.190	0.127	0.099	0.178	0.126	0.118	0.111
22	1.287E	0.310E	0.436E	0.301	0.190	0.190	0.164	0.087	0.125	0.118	0.118	0.111
23	0.689E	0.400E	0.408E	0.301	0.190	0.190	0.148	0.087	0.111	0.111	0.118	0.099
24	0.595E	0.437E	0.592E	0.301	0.190	0.268	0.127	0.087	0.111	0.111	0.113	0.099
25	0.451E	0.359E	0.637E	0.301	0.190	0.237	0.127	0.087	0.111	0.111	0.100	0.094
26	0.338E	0.307E	0.483E	0.301	0.190	0.259	0.127	0.087	0.111	0.111	0.100	0.542
27	0.299E	0.297E	0.425E	0.277	0.190	0.232E	0.127	0.087	0.111	0.119	0.100	0.376
28	0.281E	0.299E	0.388E	0.254	0.190	0.222E	0.116	0.087	0.111	0.127	0.100	1.021
29	0.320E		0.388E	0.238	0.190	0.222	0.111	0.087	0.111	0.127	0.100	0.425
30	0.338E		0.360E	0.222	0.190	0.222	0.111	0.087	0.106	0.127	0.100	0.825
31	0.321E		0.341E		0.199		0.111	0.087		0.127		2.203
MEAN	0.3154	0.5884	0.5269	0.3091	0.2082	0.2107	0.2283	0.0981	0.1294	0.1186	0.1366	0.2792
INCRS	0.2926	0.4999	0.495	0.281	0.195	0.191	0.214	0.092	0.118	0.111	0.124	0.262
STA AV	0.669	0.725	1.093	0.805	0.538	0.283	0.254	0.290	0.211	0.231	0.237	0.431

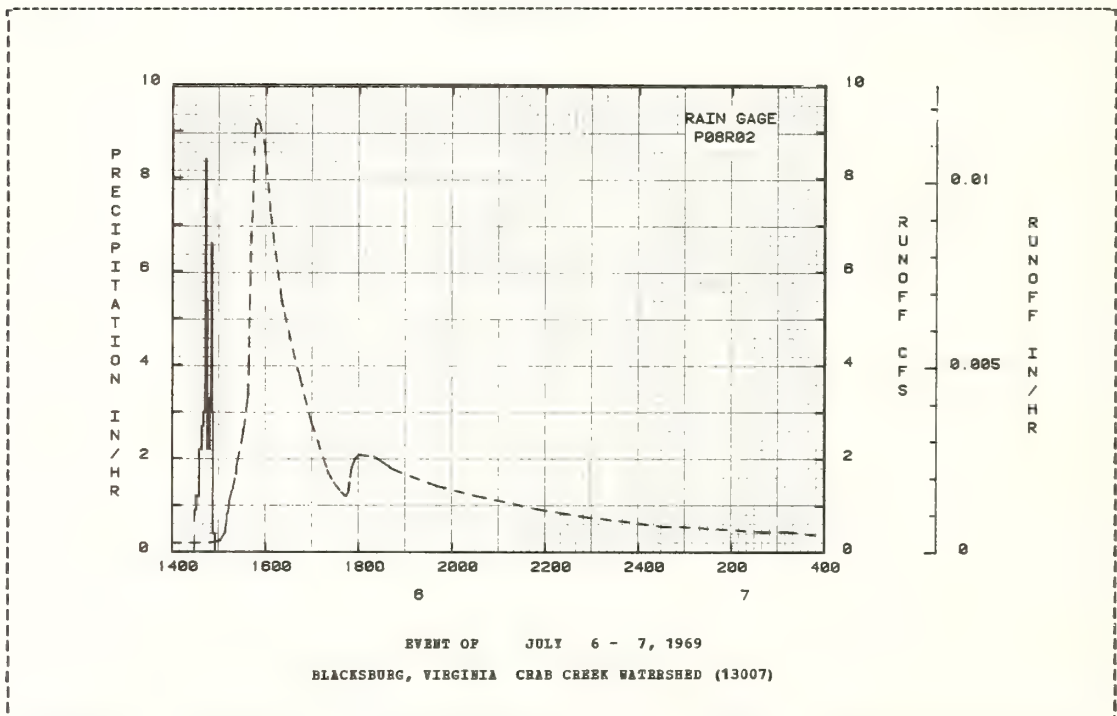
NOTES: To convert CFS to IN/DAY, multiply by 0.030281. STA AV based on record period August 1957 through 1969.

1969 SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA CRAB CREEK WATERSHED (13007)							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JULY 6 - 7, 1969										
BG P08R02			BG P08R02							
7- 6	0.0	0.003	7- 6	1429	0.0	0.0	7- 6	1120	0.220	0.0
				1431	0.9000	0.03		1240	0.220	0.0004
				1435	1.2000	0.11		1300	0.190	0.0005
				1438	2.2000	0.22		1450	0.200	0.0009
				1440	2.7000	0.31		1502	0.250	0.0010
WATERSHED CONDITIONS:				1442	2.9999	0.41		1508	0.410	0.0010
Permanent pasture, blue grass				1443	8.4001	0.55		1510	0.660	0.0010
combined with other native				1445	5.3999	0.73		1511	0.820	0.0010
grasses and clover, good				1448	2.2000	0.84		1512	0.860	0.0010
cover, 43%; row crop, 10%;				1450	3.2999	0.95		1513	0.970	0.0010
alfalfa and other hay, good				1451	6.6001	1.06		1514	1.120	0.0010
cover, 28%; idle with weeds,				1452	3.0001	1.11		1518	1.370	0.0011
grasses, and vines, good				1455	0.4000	1.13		1522	1.670	0.0012
cover, 85%; farm woods								1523	1.840	0.0012
predominately hard wood, 13%;								1524	1.950	0.0012
paved roads, 1%										
								1530	2.460	0.0015
								1532	2.640	0.0016
								1536	3.180	0.0018
								1537	3.390	0.0019
								1538	4.000	0.0020
								1539	5.310	0.0021
								1540	5.810	0.0022
								1541	6.660	0.0023
								1542	7.100	0.0025
								1543	7.510	0.0026
								1544	8.060	0.0028
								1545	8.960	0.0030
								1547	9.270	0.0034
								1551	9.200	0.0042
								1558	8.680	0.0055
								1606	7.220	0.0068
								1612	6.410	0.0077
								1620	5.440	0.0087
								1624	5.110	0.0091
								1640	3.940	0.0106

NOTES: To convert CPS to IN/HR, multiply by 0.0012617.

1969 SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA CRAB CREEK WATERSHED (13007)					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day
								(cfs)
								Acc.
								(inches)
EVENT OF JULY 6 - 7, 1969 (CONTINUED)								
							7- 6	
							1644	3.740 0.0109
							1659	2.780 0.0119
							1720	1.740 0.0129
							1728	1.480 0.0132
							1738	1.280 0.0135
							1744	1.200 0.0137
							1747	1.300 0.0138
							1749	1.610 0.0139
							1751	1.800 0.0140
							1753	1.890 0.0141
							1755	1.990 0.0142
							1800	2.080 0.0144
							1820	2.040 0.0153
							1832	1.910 0.0158
							1844	1.770 0.0163
							1940	1.410 0.0182
							2032	1.200 0.0196
							2150	0.920 0.0213
							2220	0.840 0.0219
							2248	0.760 0.0224
							2400	0.620 0.0234
							30	0.550 0.0238
							54	0.550 0.0241
							238	0.440 0.0252
							312	0.440 0.0255
							736	0.340 0.0277

NOTES: To convert CFS to IN/HR, multiply by 0.0012617.



AREA: 893.00 acres 1.40 sq. miles

NOTES: Watershed conditions: Permanent pasture, usually a fair cover of native grasses, 33%; farm woods, a mixture of hardwoods and conifers, 34%; row crops, 4%; hay, 20%; idle land, 7%; roads, 2%. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 13.8-5. Precipitation: Thiessen weighted from B-1 and B-2. Station averages determined from continuous records from August 1957 through 1969. For long-time precipitation records, see U.S. Weather Bureau records at Blacksburg, Virginia.

NOTES: Precipitation amounts are Thiessen weighted values from rain gages R-1 and R-2. STA AV based on record period August 1957 through 1969.

1969	MEAN DAILY DISCHARGE (cfs)					BLACKSBURG, VIRGINIA BRUSH CREEK WATERSHED (13006)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.030E	3.947E	1.305E	1.654E	1.183	0.874	0.919	0.459	0.649	0.578	2.084	0.702
2	1.121E	7.250E	1.336E	1.631E	1.154	1.093	0.815	0.643	0.652	1.740	1.581	0.702
3	0.969E	3.247E	1.347E	1.562	1.124	0.860	0.689	0.848	0.675	0.814	0.977	0.657
4	0.842E	1.994E	1.385E	1.646	1.117	0.696E	0.619	0.738	0.695	0.672	0.822	0.653
5	0.980E	1.784E	1.424E	1.576	1.093	0.612E	0.611	0.736	0.620	0.656	0.774	0.671
6	0.776E	1.908E	1.481E	1.475	1.037	0.612E	2.134	0.717	0.565	0.640	0.729	0.645
7	0.815E	2.133E	1.328E	1.356	1.011	0.983E	1.229	0.551	0.552	0.713	0.702	1.089
8	0.781E	2.397E	1.783E	1.328	1.042	1.431E	1.091	0.533	0.688	1.436	0.702	1.560
9	1.004E	2.454E	2.400E	1.311	1.302	1.005E	0.935	0.542	0.532	0.813	0.763	1.220
10	0.881E	1.841E	1.929E	1.515	1.063	1.004E	1.611	0.872	0.500	0.765	0.733	5.318E
11	0.793E	1.844E	1.524E	1.470	1.063	0.906	1.658	0.545	0.500	0.739	0.702	2.718
12	0.701E	1.282E	1.478E	1.295	1.119	0.811	1.097	0.523	0.500	0.666	0.790	1.481
13	0.637E	1.271E	1.424E	1.251	1.012	1.808	0.778	0.492	0.487	0.629	0.774	1.165
14	0.691E	1.245E	1.564E	1.421	1.048	1.594	0.686	0.552	0.466	0.631	0.774	1.148
15	0.757E	1.243E	1.727E	1.830	1.011	6.455	0.649	0.558	0.457	0.657	0.666	1.018
16	0.831E	1.266E	2.095E	2.481	0.967	2.875	0.600	3.002	0.457	0.657	0.707	0.922
17	2.410E	1.282E	2.518E	1.583	0.908	1.370	0.591	0.895	0.482	0.657	0.774	0.918
18	14.200E	1.324E	2.441E	1.786	1.031	1.162	0.571	0.745	0.594	0.657	0.750	0.855
19	13.147E	1.259E	5.892E	2.608	2.053	1.003	0.543	0.844	1.511	0.657	1.926	0.841
20	13.187E	1.215E	3.060E	1.875	1.140	0.896	0.612	4.806	4.261	0.683	1.149	0.774
21	13.134E	1.241E	2.394E	1.640	1.000	0.850	0.567	0.931	1.213	0.752	0.887	0.759
22	12.871E	1.252E	1.896E	1.656	0.954	0.878	0.530	0.697	0.903	0.702	0.866	0.963
23	12.885E	1.491E	1.715E	1.497	0.934	0.823	0.667	0.622	0.730	0.688	0.804	0.904
24	12.010E	1.680E	7.273E	1.392	0.891	0.928	0.596	0.591	0.715	0.657	0.774	0.860
25	1.882E	1.404E	8.251E	1.293	0.882	0.854	0.617	0.574	0.668	0.657	0.774	0.702
26	1.478E	1.276E	3.076E	1.244	0.779	0.751	0.612	0.553	0.620	0.659	0.774	1.131
27	1.368E	1.216E	2.305E	1.198	0.888	0.775	0.575	0.517	0.611	0.654	0.774	1.529
28	1.284E	1.192E	2.017E	1.302	0.813	0.703	0.534	0.503	0.568	0.657	0.774	0.954
29	1.489E		2.173E	1.418	0.763	0.628	0.563	0.494	0.567	0.657	0.757	1.053
30	1.652E		1.944E	1.215	0.714	0.568	0.543	0.491	0.567	0.641	0.718	8.110
31	1.562E		1.704E		0.821		0.491	0.483		0.639		10.629
MEAN	3.8117	1.9031	2.3930	1.5503	1.0296	1.1936	0.7979	0.8406	0.7669	0.7362	0.8927	1.6984
INCHES	3.149	1.420	1.977	1.240	0.851	0.954	0.659	0.695	0.613	0.608	0.714	1.403
STA AV	1.791	1.866	2.333	1.820	1.501	0.958	0.889	0.871	1.071	1.169	1.185	1.528

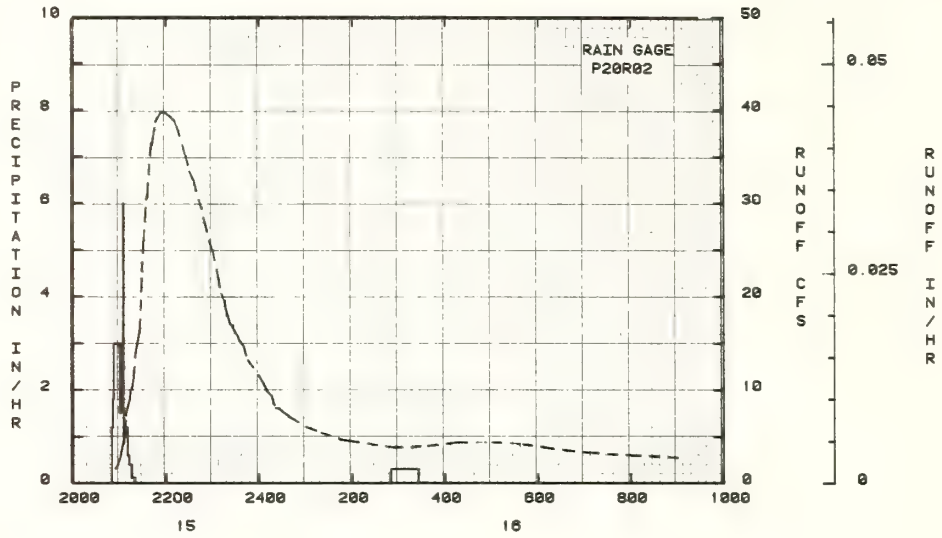
NOTES: To convert CFS to IN/DAY, multiply by 0.026652. STA AV based on record period August 1957 through 1969.

1969	SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA BRUSH CREEK WATERSHED (13008)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JUNE 15 - 16, 1969											
RG F20R02			RG F20R02								
6-15	0.92	0.090	6-15	2050	0.0	0.0	6-15	2054	1.580	0.0	
				2051	1.2003	0.02		2057	1.900	0.0001	
				2052	1.8005	0.05		2100	2.610	0.0002	
				2053	2.9979	0.10		2102	3.320	0.0003	
				2054	3.0007	0.15		2104	4.210	0.0004	
WATERSHED CONDITIONS:											
Permanent pasture of native			2055	3.0007	0.20		2107	5.740	0.0007		
grasses, good cover, 33%;			2056	2.9980	0.25		2108	7.290	0.0008		
woods, mixture of pine and			2057	3.0007	0.30		2109	7.750	0.0009		
hardwood with considerable			2058	3.0007	0.35		2110	8.170	0.0010		
undergrowth, good cover,			2059	3.0007	0.40		2113	9.120	0.0015		
34%; hay, 20%; row crop, 4%;			2100	2.9980	0.45		2114	9.900	0.0017		
idle land, 7%; roads, 2%.			2102	1.5004	0.50		2116	10.350	0.0021		
			2104	2.9993	0.60		2118	11.510	0.0025		
			2105	6.0015	0.70		2120	13.650	0.0030		
			2108	0.9999	0.75		2122	14.770	0.0035		
			2110	1.2003	0.79		2123	14.990	0.0038		
			2112	0.5999	0.81		2124	15.580	0.0041		
			2115	0.4000	0.83		2126	16.590	0.0047		
			2120	0.1200	0.84		2128	20.940	0.0054		
			6-16	250	0.0	0.84	2129	22.710	0.0058		
			325	0.3086	1.02		2130	24.920	0.0062		
							2131	26.100	0.0067		
							2133	28.510	0.0077		
							2134	30.430	0.0083		
							2135	30.640	0.0089		
							2136	31.150	0.0095		
							2140	35.950	0.0120		
							2141	36.510	0.0127		
							2142	36.220	0.0134		
							2143	37.080	0.0141		
							2146	38.770	0.0162		
							2149	39.190	0.0184		
							2153	39.720	0.0213		
							2200	39.620	0.0264		
							2210	38.920	0.0337		

NOTES: To convert CFS to IN/HR, multiply by 0.0011105.

1969 SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA BRUSH CREEK WATERSHED (13008)						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
									Acc. (inches)
EVENT OF JUNE 15 - 16, 1969 (CONTINUED)									
6-15							2214	38.190	0.0366
							2225	35.070	0.0441
							2230	33.410	0.0473
							2236	32.280	0.0509
							2250	27.920	0.0587
							2256	25.900	0.0617
							2300	24.870	0.0636
							2307	21.990	0.0666
							2311	20.310	0.0682
							2315	19.500	0.0697
							2317	18.650	0.0704
							2320	17.840	0.0714
							2322	17.110	0.0720
							2325	16.840	0.0729
							2327	16.490	0.0735
							2333	15.640	0.0753
							2334	15.290	0.0756
							2340	14.630	0.0773
							2345	13.190	0.0786
							2400	11.430	0.0820
6-16							6	10.530	0.0832
							9	10.090	0.0838
							10	9.840	0.0840
							16	9.320	0.0851
							21	8.060	0.0859
							26	7.970	0.0866
							30	7.680	0.0872
							40	7.040	0.0886
							102	5.980	0.0913
							120	5.380	0.0932
							142	4.830	0.0953
							145	4.650	0.0956
							156	4.530	0.0965
							252	3.840	0.1008
							316	3.860	0.1025
							338	4.050	0.1041
							402	4.230	0.1059
							416	4.400	0.1070
							500	4.380	0.1106
							540	4.190	0.1138
							608	3.830	0.1159
							634	3.550	0.1177
							706	3.280	0.1197
							800	3.010	0.1228
							900	2.730	0.1260

NOTES: To convert CFS to IN/HR, multiply by 0.0011105.



EVENT OF JUNE 15 - 16, 1969
BLACKSBURG, VIRGINIA BRUSH CREEK WATERSHED (13008)

BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)

LOCATION: Halifax County, Va., 3.5 mi. SW of Tuberville, Va., Winns Creek, Dan River.

AREA: 1471.00 acres 2.30 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual												
1969	P 1.87	2.85	4.07	2.25	2.78	4.39	4.02	1.91	4.34	1.05	0.98	4.56	35.07												
	Q 0.474	0.659	1.081	0.577	0.341	0.650	0.270	0.186	0.220	0.200	0.210	0.475	5.342												
STA AV	P 3.13	3.26	3.40	2.87	3.63	3.14	3.95	4.13	2.89	2.91	2.41	3.21	38.95												
	Q 0.961	1.201	1.311	0.958	0.832	0.592	0.455	0.529	0.359	0.598	0.492	0.548	8.837												
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date																	
1969	6-15 0.209	6-15 0.173	6-15 0.259	6-15 0.321	6-15 0.341	6-15 0.359	6-15 0.380	3- 3 0.520																	
MAXIMUMS FOR PERIOD OF RECORD																									
	10-10 1.120	10-10 0.710	10-10 1.030	10-10 1.410	10-10 1.510	10-10 1.580	10-10 1.620	10-10 1.910																	
	1959	1959	1959	1959	1959	1959	1959	1959																	

NOTES: Watershed conditions: Farm woods, mixture of hardwoods and conifers, with pine predominating, 58%; cultivated, 18%; pasture, native grass mixture, usually fair cover, 8%; idle, 16%. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1968, USDA Misc. Pub. 1330, p. 13.010-5. For drainage pattern map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1960-61, USDA Misc. Pub. 994, p. 13.10-8. Precipitation: Thiessen weighted from R-1, R-2, and R-3. Station averages determined from continuous records from Jan. 1958 through 1969. For long-time precipitation records, see U.S. Weather Bureau records at Halifax (1 mile N), Virginia.

1969 DAILY PRECIPITATION (inches)					BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.70	1.34S	0.0	0.0	0.0	0.05	0.0	0.0	0.02	0.13	0.0
2	0.0	0.90	0.0	0.0	0.0	0.85	0.0	0.11	0.15	0.49	0.06E	0.0
3	0.0	0.08	0.0	0.0	0.0	0.0	0.08	0.07	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.57	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.22	0.08	0.0	0.0	0.0
6	0.0	0.09E	0.53S	0.31	0.0	0.0	0.0	0.0	0.95E	0.0	0.0	0.0
7	0.0	0.0	0.18S	0.0	0.0	0.0	0.65	0.0	0.0	0.0	0.0	0.74
8	0.0	0.61E	0.0	0.0	0.0	0.39	0.08	0.02	0.17	0.38	0.0	0.0
9	0.0	0.03E	0.20E	0.0	0.31	0.14	0.10	0.0	0.0	0.0	0.02	0.0
10	0.0	0.0	0.0	0.15	0.0	0.0	0.07	0.43E	0.0	0.0	0.0	1.26
11	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.21	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.11	0.01	0.0	0.04E	0.0	0.0	0.0	0.01
15	0.0	0.0	0.0	0.17	0.01	2.53E	0.0	0.24E	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.60	0.0	0.13E	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0
18	0.0	0.0	0.37	0.92	0.03	0.05	0.0	0.0	0.0	0.0	0.0	0.0
19	0.12	0.0	0.78	0.0	1.19	0.08	0.0	0.0	0.19E	0.0	0.56	0.0
20	1.44	0.0	0.0	0.0	0.0	0.0	0.70	0.20	1.42E	0.0	0.0	0.0
21	0.23	0.0	0.0	0.0	0.48	0.14	1.09	0.0	0.02E	0.0	0.0	0.47
22	0.04E	0.07S	0.0	0.00	0.0	0.0	0.07	0.0	0.02	0.0	0.0	0.46
23	0.0	0.37S	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.0
24	0.01E	0.0	0.52	0.0	0.44	0.06	0.04	0.0	1.28E	0.0	0.0	0.0
25	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.31E
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.16E	0.0	0.25E
27	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0 S	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.04	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.03
30	0.03E	0.0	0.0	0.0	0.0	0.0	0.42	0.0	0.0	0.0	0.0	0.03
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.87	2.85	4.07	2.25	2.78	4.39	4.02	1.91	4.34	1.05	0.98	4.56
STA AV	3.13	3.26	3.40	2.87	3.63	3.14	3.95	4.13	2.89	2.91	2.41	3.21

NOTES: Precipitation amounts are Thiessen weighted values from rain gages R-1, R-2, and R-3. STA AV based on record period January 1958 through 1969.

1969	MEAN DAILY DISCHARGE (cfs)					BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.338E	1.263E	0.892E	0.996	0.756	0.487	0.396	0.392	0.205	0.373	0.436	0.415	
2	0.834E	10.788E	1.126E	1.023	0.756	0.932	0.451	0.408	0.265	0.633	0.429	0.415	
3	0.717E	3.447E	1.278E	0.986	0.756	1.035	0.462	0.449	0.295	0.406	0.415	0.415	
4	0.652E	1.784E	1.884E	0.968	0.734	0.526	0.406	0.880	0.282	0.364	0.415	0.415	
5	0.612E	1.317E	2.412E	0.958	0.675	0.503	0.383	0.600	0.266	0.364	0.415	0.415	
6	0.604E	1.128E	4.898E	1.130	0.653	0.475	0.360	0.461	1.581	0.379	0.415	0.415	
7	0.565E	1.017E	13.640E	0.935	0.601	0.465	0.576	0.416	0.369	0.386	0.415	0.713	
8	0.581E	1.224E	3.465E	0.890	0.578	0.748	0.700	0.374	0.346	0.550	0.415	0.577	
9	0.636E	2.928E	2.525E	0.890	0.787	0.531	0.478	0.356	0.322	0.445	0.415	0.460	
10	0.538E	1.446E	2.027E	0.952	0.653	0.560	0.546	0.658	0.282	0.386	0.415	2.941	
11	0.508E	1.168E	1.547E	0.930	0.653	0.522	0.490	0.373	0.282	0.386	0.415	1.035	
12	0.536E	1.014E	1.278E	0.890	0.635	3.476	0.509	0.362	0.282	0.386	0.505	0.666	
13	0.491E	0.907E	1.161E	0.870	0.578	0.457	0.400	0.386	0.264	0.386	0.425	0.581	
14	0.496E	0.834E	1.019E	0.890	0.576	0.456	0.363	0.389	0.260	0.386	0.415	0.549	
15	0.496E	0.829E	0.985E	0.928	0.608	20.969	0.350	0.441	0.245	0.386	0.415	0.542	
16	0.494E	0.816E	0.921E	1.653	0.556	2.223	0.333	0.386	0.211	0.386	0.415	0.504	
17	0.537E	0.741E	0.926E	1.206	0.526	1.104	0.322	0.337	0.201	0.386	0.415	0.504	
18	0.560E	0.725E	1.020E	3.148	0.505	0.864	0.309	0.337	0.193	0.373	0.415	0.504	
19	0.573E	0.703E	7.211E	3.411	1.215	0.795	0.300	0.349	0.204	0.361	0.660	0.504	
20	3.288E	0.712E	2.247E	1.789	0.726	0.665	1.049	0.401	1.346	0.368	0.518	0.504	
21	4.208E	0.674E	1.583E	1.461	1.001	0.621	2.340	0.303	0.449	0.370	0.437	0.497	
22	2.143E	0.762E	1.263E	1.253	0.616	0.672	0.578	0.285	0.363	0.341	0.415	1.783	
23	1.404E	0.926E	1.165E	1.127	0.616	0.635	0.440	0.267	0.327	0.368	0.415	0.832	
24	1.118E	0.742E	1.595E	1.053	1.113	0.535	0.602	0.265	2.168	0.376	0.415	0.696	
25	0.925E	0.721E	1.990E	0.986	0.719	0.578	0.433	0.253	0.585	0.387	0.415	0.901	
26	0.831E	0.712E	1.431E	0.919	0.605	0.534	0.413	0.249	0.472	0.452	0.415	5.166	
27	0.764E	0.712E	1.220E	0.890	0.683	0.504	0.369	0.233	0.432	0.409	0.415	1.724	
28	0.721E	0.712E	1.109E	0.862	0.587	0.459	0.396	0.229	0.373	0.415	0.415	1.080	
29	0.706E		1.083E	0.858	0.554	0.415	0.484	0.228	0.351	0.406	0.415	1.116	
30	0.712E		0.993E	0.786	0.531	0.400	1.023	0.221	0.359	0.386	0.415	1.335	
31	0.703E		0.923E		0.508		0.424	0.207		0.386		1.143	
MEAN	0.9449	1.4555	2.1554	1.1880	0.6794	1.3382	0.5382	0.3708	0.4526	0.3996	0.4318	0.9467	
INCHES	0.474	0.659	1.081	0.577	0.341	0.650	0.270	0.186	0.220	0.200	0.210	0.475	
STA AV	0.961	1.201	1.311	0.958	0.832	0.592	0.455	0.529	0.359	0.598	0.492	0.548	

NOTES: To convert CFS to IN/DAY, multiply by 0.016178. STA AV based on record period January 1958 through 1969.

1969	SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JUNE 15 - 16, 1969											
RG P24B02			RG P24B02								
6-15	0.15	0.005	6-15	1404	0.0	0.0	6-15	1424	0.680	0.0	
				1407	1.0001	0.05		1428	0.740	0.0	
				1410	1.0001	0.10		1440	0.680	0.0001	
				1412	1.1998	0.14		1452	0.800	0.0002	
				1421	0.0667	0.15		1457	1.160	0.0003	
WATERSHED CONDITIONS:				1425	0.2998	0.17	1458	1.320	0.0003		
Farm woods, mixture of				1440	0.0400	0.18	1500	1.390	0.0003		
hardwoods and conifers				1445	0.2399	0.20	1503	1.780	0.0004		
with pine predominating, 58%;				1457	0.2500	0.25	1504	1.870	0.0004		
cultivated, 18%; pasture				1500	1.0001	0.30	1506	1.930	0.0004		
native grass mixture, usually											
fair cover, 8%; idle, 16%.				1504	3.7500	0.55	1509	2.450	0.0005		
				1508	2.2499	0.70	1510	2.600	0.0005		
				1512	1.5001	0.80	1512	2.340	0.0006		
				1518	2.5000	1.05	1514	3.340	0.0007		
				1527	3.3333	1.55	1517	5.180	0.0008		
				1530	2.0001	1.65	1520	8.080	0.0010		
				1535	1.1999	1.75	1521	11.050	0.0011		
				1540	0.6000	1.80	1522	12.760	0.0012		
				1547	0.4286	1.85	1523	14.460	0.0014		
				1555	0.3750	1.90	1524	15.620	0.0016		
				1600	0.2399	1.92	1526	18.560	0.0020		
				1630	0.0400	1.94	1527	24.780	0.0022		
				1700	0.0200	1.95	1528	27.800	0.0025		
			6-16	600	0.0	1.95	1530	33.110	0.0032		
				750	0.0545	2.05	1531	38.120	0.0036		
							1533	55.840	0.0047		
							1534	81.470	0.0055		
							1535	79.470	0.0064		
							1536	72.370	0.0072		
							1538	88.890	0.0090		
							1539	111.150	0.0101		
							1540	118.910	0.0114		
							1542	122.350	0.0141		
							1544	122.150	0.0168		
							1551	126.220	0.0266		

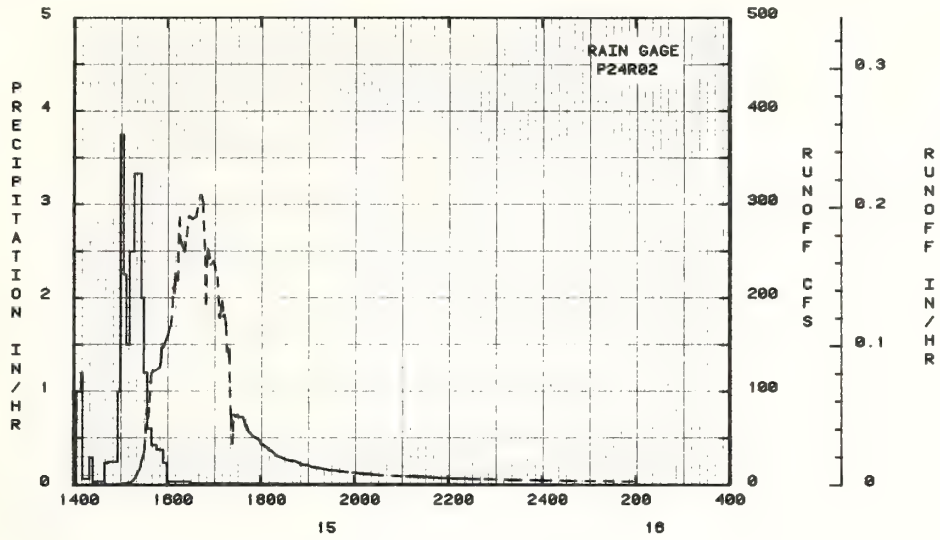
NOTES: To convert CFS to IN/HR, multiply by 0.0006741.

1969 SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA			LITTLE WINNS CREEK WATERSHED (13010)		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	Mo-Day	of Day	(cfs)
					Acc. (inches)			Acc. (inches)
EVENT OF JUNE 15 - 16, 1969 (CONTINUED)								
						6-15	1553	137.590
							1554	151.320
							1555	147.090
							1556	148.310
							1558	154.110
							1601	161.110
							1603	167.770
							1605	170.410
							1607	191.340
							1608	211.360
							1609	205.070
							1610	215.720
							1611	225.960
							1614	218.260
							1615	258.370
							1616	286.180
							1617	263.600
							1619	255.550
							1623	249.540
							1625	265.810
							1628	287.570
							1632	284.220
							1635	285.620
							1637	286.480
							1642	307.050
							1644	310.020
							1646	301.600
							1649	244.290
							1650	193.510
							1651	238.730
							1653	251.890
							1656	235.350
							1700	239.310
							1705	221.870
							1707	181.180
							1708	178.670
							1710	190.970
							1711	196.230
							1713	181.580
							1714	182.170
							1716	170.620
							1717	142.330
							1718	142.810
							1719	145.820
							1720	139.830
							1721	103.920
							1722	79.290
							1723	70.540
							1724	44.450
							1725	57.920
							1726	75.200
							1728	73.240
							1729	72.530
							1731	75.140
							1732	72.520
							1738	72.220
							1740	67.350
							1741	62.520
							1742	64.080
							1743	61.420
							1744	58.910
							1745	56.730
							1747	55.760
							1749	53.690
							1750	52.280
							1755	50.340
							1759	47.580
							1801	43.580
							1803	43.220
							1806	41.170
							1808	40.150
							1810	38.790
							1811	37.450
							1813	37.480
							1816	35.210

NOTES: To convert CFS to IN/HR, multiply by 0.0006741.

1969 SELECTED RUNOFF EVENT BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JUNE 15 - 16, 1969 (CONTINUED)											
							6-15	1818	33.950	0.2901	
								1819	32.660	0.2905	
								1820	31.460	0.2909	
								1822	30.930	0.2916	
								1824	30.080	0.2923	
								1830	28.370	0.2943	
								1832	27.220	0.2949	
								1837	26.030	0.2964	
								1840	25.760	0.2973	
								1846	25.050	0.2990	
								1849	23.840	0.2998	
								1851	22.530	0.3003	
								1852	21.850	0.3005	
								1853	22.440	0.3008	
								1854	21.760	0.3010	
								1900	21.090	0.3024	
								1906	19.330	0.3038	
								1907	18.930	0.3040	
								1912	18.360	0.3050	
								1917	17.720	0.3060	
								1918	17.680	0.3062	
								1922	16.820	0.3070	
								1924	16.910	0.3074	
								1927	15.960	0.3080	
								1928	15.620	0.3082	
								1932	15.660	0.3089	
								1938	15.140	0.3099	
								1940	14.700	0.3102	
								1958	13.110	0.3130	
								2001	13.080	0.3134	
								2004	12.610	0.3138	
								2008	12.360	0.3144	
								2018	11.840	0.3158	
								2020	11.730	0.3161	
								2025	11.020	0.3167	
								2107	9.030	0.3214	
								2118	8.820	0.3225	
								2122	8.650	0.3229	
								2124	8.290	0.3231	
								2130	8.230	0.3237	
								2134	8.200	0.3241	
								2142	7.650	0.3248	
								2153	7.520	0.3257	
								2154	7.490	0.3258	
								2208	6.940	0.3269	
								2216	6.780	0.3275	
								2223	6.750	0.3280	
								2228	6.470	0.3284	
								2247	6.110	0.3297	
								2250	6.110	0.3299	
								2318	5.470	0.3317	
								2322	5.490	0.3319	
								2400	4.860	0.3341	
							6-16	32	4.510	0.3358	
								200	3.680	0.3398	

NOTES: To convert CFS to IN/HR, multiply by 0.0006741.



EVENT OF JUNE 15 - 16, 1969
 BLACKSBURG, VIRGINIA LITTLE WINNS CREEK WATERSHED (13010)

BLACKSBURG, VIRGINIA ROCKY RUN BRANCH WATERSHED (13011)

LOCATION: Brunswick County, Va., on Route No. 58, 4 mi. W. of Lawrenceville, Va., Meherrin River.

AREA: 555.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														BLACKSBURG, VIRGINIA ROCKY RUN BRANCH WATERSHED (13011)											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	2.53	4.45	4.56	2.55	2.01	4.96	4.47	5.99	3.33	1.68	1.72	3.96	42.22											
	Q	0.692	1.196	1.525	0.829	0.409	0.433	0.236	0.704	0.235	0.321	0.286	0.787	7.653											
STA AV	P	2.96	3.45	3.19	2.39	3.45	4.25	4.15	4.07	2.90	2.64	2.51	3.08	39.04											
	Q	0.897	1.213	1.349	0.891	0.843	0.635	0.434	0.385	0.281	0.357	0.470	0.720	8.475											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		8-5	0.045	8-5	0.043	8-5	0.080	8-5	0.166	8-5	0.213	2-23	0.267	3-6	0.328	3-3	0.756								
MAXIMUMS FOR PERIOD OF RECORD																									
		6-7	0.220	6-7	0.190	5-8	0.340	5-6	0.710	5-6	0.980	5-6	1.450	5-5	2.090	4-30	2.860								
		1961		1961		1958		1958		1958		1958		1958		1958									

NOTES: Watershed conditions: Mixed cover, farm woods, mixture of hardwoods and conifers, 57%; permanent pasture, usually a good cover of native grass and clover mixture, 13%; alfalfa and other hay crops, 5%; cultivated, 5%; roads, 1%; idle, 15%. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 13.11-6. Precipitation: Thiessen weighted from R-1 and R-2. Station averages determined from continuous records from April 1958 through 1969. For long-time precipitation records see U.S. Weather Bureau records at Emporia (1 mile WNW), Virginia.

1969 DAILY PRECIPITATION (inches)														BLACKSBURG, VIRGINIA ROCKY RUN BRANCH WATERSHED (13011)											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.0	0.59	1.31S	0.0	0.0	0.0	0.06	1.02	0.0	0.0	0.01E	0.0													
2	0.0	0.95	0.0	0.05	0.0	0.26	0.0	0.08	0.34	1.49	0.58E	0.0													
3	0.0	0.08	0.0	0.0	0.0	0.03	0.46	0.42	0.0	0.0	0.0	0.0													
4	0.0	0.0	0.0	0.34	0.0	0.0	0.01	0.97	0.0	0.0	0.0	0.0													
5	0.0	0.0	0.0	0.07	0.0	0.0	0.0	1.31	0.0	0.0	0.0	0.0													
6	0.0	0.0	0.66S	0.34	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0													
7	0.0	0.0	0.31S	0.0	0.0	0.0	0.47	0.0	0.0	0.02	0.0	0.47E													
8	0.0	0.88H	0.0	0.0	0.0	0.0	0.05	0.0	0.07	0.12	0.09	0.0													
9	0.0	0.17H	0.77H	0.0	0.17	1.43	0.01	0.0	0.0	0.0	0.00	0.0													
10	0.0	0.0	0.0	0.17	0.0	0.03	0.03	0.64	0.0	0.0	0.0	1.28E													
11	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
12	0.0	0.0	0.0	0.0	0.0	0.01	0.03	0.0	0.0	0.0	0.42	0.0													
13	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.63	0.0	0.0	0.0	0.0													
14	0.0	0.0	0.0	0.0	0.03	0.25	0.0	0.11	0.0	0.0	0.0	0.13E													
15	0.0	0.0	0.0	0.0	0.0	1.62	0.0	0.0	0.0	0.0	0.0	0.0													
16	0.0	0.0	0.0	0.52	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.0	0.0	0.0													
18	0.0	0.0	0.23	0.96	0.02	0.35	0.0	0.38	0.01	0.0	0.0	0.0													
19	0.46H	0.0	0.81	0.05E	1.04	0.18	0.0	0.0	0.04	0.0	0.60	0.0													
20	1.80H	0.0	0.0	0.0	0.16	0.0	0.41	0.43	0.89	0.0	0.03	0.0													
21	0.15H	0.0	0.0	0.0	0.04	0.0	0.22	0.0	0.02	0.0	0.0	0.09													
22	0.10E	0.10S	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48													
23	0.0	1.69S	0.0	0.0	0.0	0.0	1.59	0.0	0.0	0.0	0.0	0.0													
24	0.0	0.0	0.45	0.0	0.54	0.29	0.08	0.0	1.39	0.0	0.0	0.0													
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.98E													
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.42E													
27	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0													
28	0.0	0.0	0.0	0.0	0.0	0.0	0.81	0.0	0.0	0.0	0.0	0.0													
29	0.03E	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02													
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08													
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
TOTAL	2.53	4.45	4.56	2.55	2.01	4.96	4.47	5.99	3.33	1.68	1.72	3.96													
STA AV	2.96	3.45	3.19	2.39	3.45	4.25	4.15	4.07	2.90	2.64	2.51	3.08													

NOTES: Precipitation amounts are Thiessen weighted values from rain gages R-1 and R-2. STA AV based on record period April 1958 through 1969.

1969 MEAN DAILY DISCHARGE (cfs) BLACKSBURG, VIRGINIA ROCKY RUN BRANCH WATERSHED (13011)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.450E	0.581E	0.559E	0.532E	0.405	0.195	0.177	0.495	0.155	0.168	0.190	0.213
2	0.298E	3.603E	0.833E	0.548E	0.396	0.201	0.174	0.268	0.200	1.012	0.299	0.213
3	0.269E	1.621E	1.104E	0.548E	0.375	0.223	0.205	0.270	0.190	0.520	0.220	0.213
4	0.235E	0.857E	1.405E	0.765E	0.363	0.179	0.188	1.342	0.172	0.317	0.196	0.213
5	0.216E	0.617E	1.240E	0.626	0.359	0.176	0.164	5.756	0.156	0.274	0.190	0.213
6	0.211E	0.505E	1.315E	0.846	0.339	0.170	0.151	0.973	0.155	0.263	0.190	0.213
7	0.201E	0.447E	0.832E	0.644	0.332	0.155	0.222	0.499	0.140	0.246	0.190	0.255
8	0.201E	0.504E	1.647E	0.582	0.308	0.157	0.191	0.365	0.150	0.254	0.190	0.278
9	0.208E	3.066E	2.559E	0.548	0.338	0.587	0.190	0.306	0.146	0.233	0.190	0.246
10	0.190E	0.978E	2.268E	0.558	0.309	0.261	0.190	0.515	0.123	0.213	0.190	1.266
11	0.179E	0.673E	1.351E	0.559	0.274	0.228	0.181	0.374	0.123	0.206	0.190	0.903
12	0.176E	0.350E	0.938E	0.517	0.274	0.197	0.185	0.285	0.119	0.190	0.264	0.626
13	0.167E	0.461E	0.762E	0.498	0.274	0.289	0.145	0.410	0.129	0.190	0.240	0.521
14	0.168E	0.410E	0.655E	0.498	0.266	0.276	0.135	0.462	0.110	0.190	0.229	0.490
15	0.168E	0.411E	0.594E	0.498	0.267	1.789	0.128	0.350	0.110	0.190	0.202	0.430
16	0.167E	0.388E	0.541E	0.696	0.262	0.959	0.124	0.290	0.105	0.190	0.204	0.420
17	0.168E	0.360E	0.548	0.598	0.243	0.460	0.113	0.258	0.154	0.190	0.204	0.420
18	0.190E	0.336E	0.568	1.184	0.235	0.388	0.114	0.287	0.151	0.190	0.204	0.420
19	0.246E	0.336E	2.349	1.706	0.367	0.489	0.100	0.301	0.141	0.190	0.292	0.396
20	2.965E	0.304E	1.087	0.889	0.572	0.346	0.112	0.416	0.266	0.190	0.315	0.352
21	3.736E	0.308E	0.811	0.742	0.321	0.294	0.149	0.297	0.190	0.195	0.254	0.336
22	1.366E	0.320E	0.692	0.683	0.277	0.274	0.128	0.252	0.161	0.190	0.246	0.671
23	0.857E	5.731E	0.618	0.629	0.261	0.246	0.279	0.223	0.146	0.181	0.246	0.523
24	0.631E	1.792E	0.904	0.572	0.351	0.274	0.476	0.200	0.652	0.168	0.246	0.393
25	0.486E	0.982E	0.887	0.533	0.383	0.263	0.178	0.198	0.368	0.185	0.221	0.453
26	0.406E	0.702E	0.701	0.529	0.282	0.240	0.157	0.185	0.239	0.190	0.213	3.775
27	0.357E	0.557E	0.607	0.481	0.246	0.223	0.140	0.175	0.206	0.190	0.213	1.318
28	0.327E	0.478E	0.588	0.446	0.235	0.211	0.249	0.169	0.183	0.190	0.213	0.791
29	0.304E		0.548	0.443	0.225	0.175	0.233	0.169	0.172	0.190	0.213	0.639
30	0.308E		0.523	0.426	0.213	0.168	0.173	0.169	0.168	0.190	0.213	0.614
31	0.287E		0.520		0.196		0.142	0.161		0.190		0.538
MEAN	0.5206	0.9959	1.1473	0.6442	0.3080	0.3364	0.1772	0.5297	0.1827	0.2411	0.2223	0.5920
INCHES	0.692	1.196	1.525	0.829	0.409	0.433	0.236	0.704	0.235	0.321	0.286	0.787
STA AV	0.897	1.213	1.349	0.891	0.843	0.635	0.434	0.385	0.281	0.357	0.470	0.720

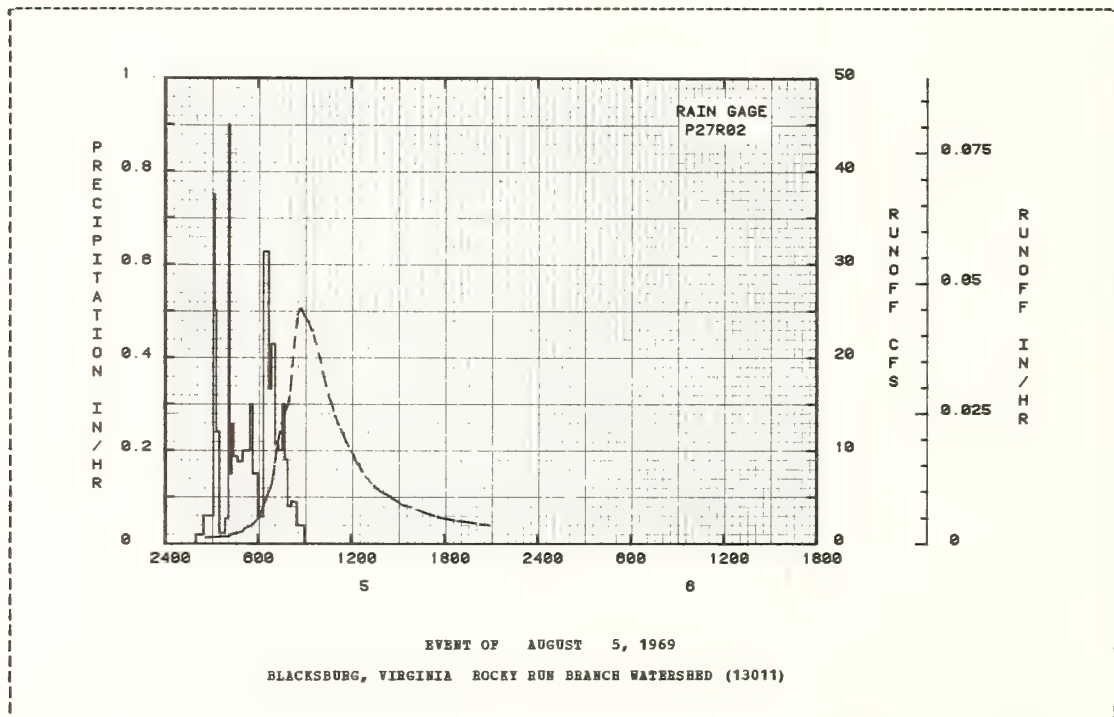
NOTES: To convert CFS to IN/DAY, multiply by 0.042886. STA AV based on record period April 1958 through 1969.

1969 SELECTED RUNOFF EVENT BLACKSBURG, VIRGINIA ROCKY RUN BRANCH WATERSHED (13011)												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF AUGUST 5, 1969												
EG P27R02			EG P27R02									
8- 5	0.0	0.004	8- 5	200	0.0	0.0	8- 5	240	0.700	0.0		
				230	0.0200	0.01		318	0.710	0.0008		
				300	0.0600	0.04		336	0.760	0.0012		
				310	0.0600	0.05		408	0.770	0.0019		
				314	0.7500	0.10		414	0.890	0.0020		
WATERSHED CONDITIONS:												
Mixed cover, farm woods,												
mixture of hardwoods and												
conifers, 57%; permanent												
pasture, usually a good												
cover of native grass and												
clover mixture, 13%; alfalfa												
and other hay crops, 5%;												
cultivated, 9%; roads, 1%;												
idle, 15%.												
				320	0.5000	0.15		416	1.000	0.0021		
				330	0.2400	0.19		418	1.010	0.0022		
				355	0.0240	0.20		424	1.010	0.0024		
				406	0.0545	0.21		428	1.140	0.0025		
				412	0.9000	0.30		432	1.100	0.0026		
				420	0.1500	0.32		440	1.180	0.0029		
				427	0.2571	0.35		458	1.290	0.0036		
				443	0.1875	0.40		504	1.470	0.0038		
				500	0.1765	0.45		512	1.640	0.0042		
				530	0.2000	0.55		516	1.720	0.0044		
				540	0.3000	0.60		534	1.910	0.0054		
				600	0.1500	0.65		552	2.380	0.0065		
				621	0.0572	0.67		602	2.780	0.0073		
				643	0.6273	0.90		612	3.380	0.0082		
				652	0.3334	0.95		620	3.920	0.0091		
				706	0.4285	1.05		635	4.950	0.0111		
				720	0.2143	1.10		646	5.730	0.0129		
				735	0.2000	1.15		648	6.020	0.0132		
				745	0.3000	1.20		656	6.610	0.0147		
				755	0.1800	1.23		700	7.390	0.0156		
				810	0.0800	1.25		706	8.730	0.0170		
				830	0.0900	1.28		708	9.150	0.0176		
				900	0.0400	1.30		714	10.070	0.0193		
								718	10.610	0.0205		
								719	11.090	0.0209		
								732	12.870	0.0255		
								748	14.280	0.0319		
								756	14.800	0.0354		
								807	16.430	0.0405		
								808	17.050	0.0411		

NOTES: To convert CFS to IN/HR, multiply by 0.0017869.

1969 SELECTED RUNOFF EVENT			BLACKSBURG, VIRGINIA ROCKY RUN BRANCH WATERSHED (13011)								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF AUGUST 5, 1969 (CONTINUED)											
							8- 5	821	21.210	0.0484	
								834	24.570	0.0573	
								846	25.220	0.0662	
								850	25.190	0.0692	
								900	24.470	0.0767	
								916	23.760	0.0881	
								936	22.320	0.1018	
								957	20.380	0.1152	
								1016	17.940	0.1260	
								1036	15.720	0.1360	
								1044	15.200	0.1397	
								1058	13.690	0.1458	
								1100	13.700	0.1467	
								1120	12.300	0.1544	
								1130	11.830	0.1580	
								1135	11.360	0.1597	
								1200	9.970	0.1677	
								1212	9.490	0.1712	
								1224	8.580	0.1744	
								1228	8.590	0.1754	
								1256	7.240	0.1820	
								1328	6.200	0.1884	
								1352	5.610	0.1926	
								1432	5.080	0.1990	
								1439	4.850	0.2000	
								1516	4.170	0.2050	
								1616	3.640	0.2120	
								1648	3.270	0.2153	
								1736	2.840	0.2197	
								1804	2.690	0.2220	
								1852	2.430	0.2256	
								1926	2.320	0.2280	
								2020	2.080	0.2315	
								2120	1.870	0.2350	

NOTES: To convert CFS to IN/HR, multiply by 0.0017869.



BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)

LOCATION: Bedford County, Va., on Route No. 460, about 6 mi. west of Forest, Va., near Goode, Va., Elk Creek, Big Otter River.

AREA: 1058.00 acres 1.65 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																	
1969	P	2.32	2.61	4.12	2.51	3.02	3.20	3.51	4.51	2.74	1.95	1.12	5.84	37.44																	
	Q	0.713	1.389	1.837	0.549	0.339	0.190	0.134	0.209	0.125	0.242	0.209	0.986	6.924																	
STA AV	P	2.53	3.34	3.52	2.24	3.21	2.84	3.38	3.81	3.29	2.84	2.88	3.23	37.11																	
	Q	0.914	1.230	1.382	0.700	0.470	0.386	0.236	0.517	0.243	0.406	0.517	0.713	7.714																	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																															
		Maximum Discharge				Maximum Volume for Selected Time Interval																									
		Date	Date	1 Hour	2 Hours	6 Hours	12 Hours	1 Day	2 Days	8 Days																					
		Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date			
1969		12-31	0.068	12-30	0.065	12-30	0.120	12-30	0.239	12-30	0.328	12-30	0.468	12-29	0.619	3-24	0.793														
MAXIMUMS FOR PERIOD OF RECORD																															
		8-23	0.390	8-23	0.330	8-24	0.550	8-24	1.030	8-23	1.630	8-23	2.260	8-22	2.420	8-20	2.800														
		1967		1967		1967		1967		1967		1967		1967		1967															

NOTES: Watershed conditions: Mixed cover, cultivated, 30%; permanent pasture, usually a good cover of native grass mixture, 26%; farm woods, a mixture of hardwoods and pine, 37%; roads, 1%; idle, 6%. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1968, Misc. Pub. 1330, p. 13.015-4. For drainage pattern map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1960-61, USDA Misc. Pub. 994, p. 13.15-5. Precipitation: Thiessen weighted from R-1, R-2, and R-3. STA AV determined from continuous records from September 1960 through 1969. For long-time precipitation records, see U.S. Weather Bureau records at Bedford, Virginia.

1969 DAILY PRECIPITATION (inches)														BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.0	0.53	0.75S	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.35	0.0															
2	0.0	0.46	0.0	0.0	0.0	0.40E	0.22	0.55	0.17	1.69	0.18	0.0															
3	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.06	0.80	0.0	0.0	0.0															
4	0.0	0.0	0.0	0.59	0.0	0.0	0.0	0.15	0.08	0.0	0.0	0.0															
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.01	0.0	0.0	0.0															
6	0.06S	0.25N	0.51S	0.04	0.0	0.0	0.37	0.0	0.0	0.0	0.0	0.0															
7	0.0	0.0	0.17S	0.0	0.0	0.0	0.73	0.0	0.0	0.08	0.0	0.0															
8	0.0	0.74N	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.12E	0.07N	0.0															
9	0.0	0.06E	0.41N	0.0	0.64	0.62	0.10	0.0	0.0	0.0	0.01	0.0															
10	0.0	0.0	0.0	0.20	0.03E	0.04E	0.12	0.58	0.0	0.0	0.0	1.15															
11	0.0	0.0	0.0	0.00	0.04E	0.0	0.06	0.0	0.0	0.0	0.00	0.01															
12	0.0	0.0	0.0	0.0	0.01E	0.02E	0.21	0.0	0.0	0.0	0.03	0.0															
13	0.0	0.0	0.0	0.0	0.0	0.05E	0.09	0.0	0.0	0.0	0.0	0.0															
14	0.0	0.0	0.0	0.06	0.00	0.09	0.0	0.05	0.0	0.0	0.00	0.00															
15	0.0	0.0	0.0	0.49	0.0	0.28	0.0	0.0	0.0	0.0	0.0	0.0															
16	0.0	0.0	0.0	0.52	0.0	0.0	0.0	0.53	0.0	0.02E	0.0	0.0															
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0															
18	0.23E	0.0	0.12	0.41	0.17	0.51	0.0	0.39	0.06	0.0	0.0	0.0															
19	0.30	0.0	0.02	0.03	2.02	0.0	0.0	0.19	0.20	0.0	0.47	0.0															
20	1.37	0.0	0.0	0.0	0.05	0.0	0.04	1.93	1.13	0.0	0.0	0.0															
21	0.17	0.0	0.0	0.00	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.24															
22	0.04E	0.02N	0.0	0.08	0.0	0.06	0.26	0.0	0.0	0.0	0.0	0.62															
23	0.04E	0.42N	0.0	0.0	0.06	0.0	0.65	0.0	0.0	0.0	0.0	0.0															
24	0.02E	0.0	1.99	0.0	0.00	0.59	0.07	0.0	0.15	0.0	0.0	0.0															
25	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	1.07S															
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16S															
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
28	0.0	0.11S	0.0	0.07	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0															
29	0.08		0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20															
30	0.00		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.55															
31	0.00		0.0		0.0							0.04															
TOTAL	2.32	2.61	4.12	2.51	3.02	3.20	3.51	4.51	2.74	1.95	1.12	5.84															
STA AV	2.53	3.34	3.52	2.24	3.21	2.84	3.38	3.81	3.29	2.84	2.88	3.23															

NOTES: Precipitation amounts are Thiessen weighted values from rain gages R-1, R-2, and R-3. STA AV based on record period September 1960 through 1969.

1969 MEAN DAILY DISCHARGE (cfs) BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.459E	1.841E	0.765E	0.831	0.475	0.224	0.163	0.122	0.130	0.158	0.336	0.277
2	0.433E	4.121E	1.227E	0.776	0.459	0.252	0.167	0.293	0.136	2.426	0.384	0.277
3	0.445E	2.979E	1.524E	0.742	0.470	0.315	0.204	0.195	0.567	0.571	0.299	0.277
4	0.392E	1.900E	2.260E	1.216	0.443	0.266	0.151	0.203	0.216	0.385	0.299	0.277
5	0.345E	1.862E	2.800E	0.920	0.425	0.254	0.139	0.174	0.215	0.325	0.299	0.277
6	0.338E	2.090E	2.397E	0.792	0.424	0.223	0.165	0.158	0.189	0.299	0.299	0.277
7	0.363E	1.856E	5.763E	0.691	0.396	0.210	0.485	0.128	0.179	0.304	0.291	0.668
8	0.346E	2.284E	2.791E	0.661	0.388	0.212	0.351	0.119	0.176	0.341	0.297	0.463
9	0.436E	7.421E	4.410E	0.645	0.626	0.407	0.262	0.103	0.176	0.289	0.342	0.358
10	0.378E	3.249E	3.248E	0.745	0.443	0.299	0.303	0.270	0.154	0.277	0.299	1.767
11	0.333E	2.829E	2.037E	0.687	0.445	0.286	0.271	0.124	0.149	0.267	0.299	1.241
12	0.298E	2.911E	1.622E	0.613	0.392	0.272	0.243	0.120	0.149	0.261E	0.326	0.659
13	0.286E	2.108E	1.797E	0.591	0.373	0.246	0.212	0.096	0.149	0.261E	0.300	0.515
14	0.281E	1.622E	1.774E	0.610	0.357	0.233	0.152	0.109	0.149	0.258E	0.309	0.470
15	0.271E	1.556E	1.721E	0.838	0.341	0.326	0.143	0.118	0.149	0.258E	0.299	0.427
16	0.284E	2.264E	1.529E	1.612	0.320	0.289	0.139	0.259	0.149	0.247	0.299	0.393
17	0.323E	2.231E	1.456E	1.045	0.341	0.258	0.126	0.173	0.149	0.245	0.299	0.373
18	0.375E	2.459E	1.309E	1.015	0.344	0.475	0.121	0.233	0.149	0.253	0.299	0.373
19	0.647E	2.307E	1.526E	1.489	2.457	0.319	0.116	0.226	0.149	0.249	0.466	0.373
20	4.707E	1.752E	1.097E	1.013	1.016	0.223	0.102	3.713	0.165	0.245	0.341	0.361
21	8.722E	1.735E	1.139E	0.928	0.583	0.280	0.125	0.436	0.192	0.252	0.299	0.349
22	2.475E	1.896E	0.986E	0.869	0.493	0.349	0.141	0.310	0.192	0.263	0.291	1.314
23	1.727E	2.844E	0.901E	0.811	0.459	0.283	0.375	0.250	0.192	0.245	0.287	0.704
24	1.468E	0.998E	6.115E	0.720	0.448	0.515	0.200	0.223	0.229	0.245	0.287	0.558
25	1.071E	0.790E	15.677E	0.661	0.357	0.360	0.166	0.202	0.215	0.245	0.295	0.492
26	0.834E	0.655E	4.258E	0.634	0.341	0.269	0.147	0.181	0.192	0.245	0.299	0.971
27	0.727E	0.624E	3.238E	0.576	0.341	0.254	0.130	0.160	0.187	0.256	0.299	0.500
28	0.672E	0.569E	2.374E	0.526	0.320	0.221	0.176	0.157	0.177	0.277	0.299	0.469
29	0.701E		1.680E	0.586	0.288	0.184	0.224	0.156	0.165	0.277	0.292	0.578
30	0.797E		1.203E	0.555	0.261	0.164	0.143	0.149	0.162	0.277	0.277	10.860
31	0.740E		1.013E		0.264		0.127	0.141		0.277		16.948
MEAN	1.0217	2.2053	2.6336	0.8133	0.4867	0.2822	0.1925	0.3000	0.1848	0.3477	0.3103	1.4144
INCHES	0.713	1.389	1.837	0.549	0.339	0.190	0.134	0.209	0.125	0.242	0.209	0.986
STA AV	0.914	1.230	1.382	0.700	0.470	0.386	0.236	0.517	0.243	0.406	0.517	0.713

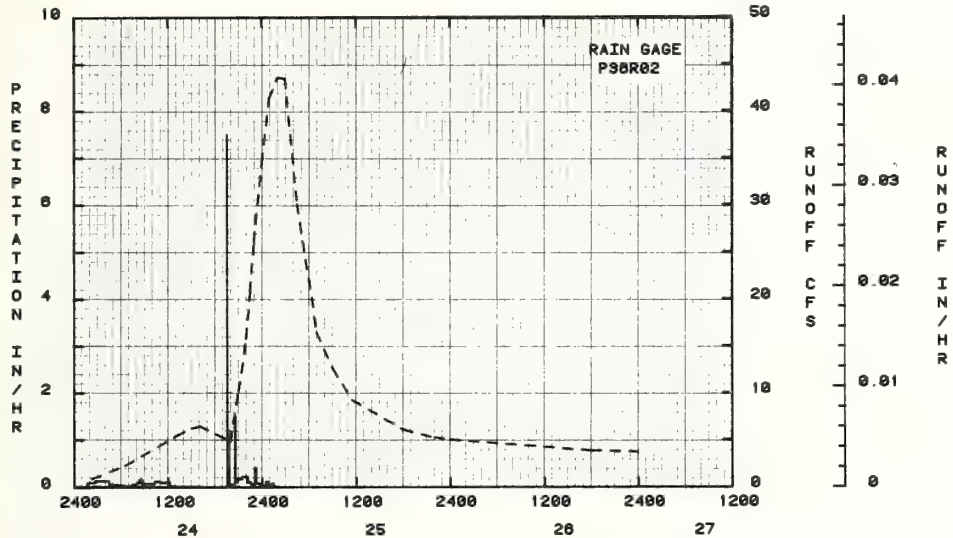
NOTES: To convert CFS to IN/DAY, multiply by 0.022495. STA AV based on record period September 1960 through 1969.

1969	SELECTED RUNOFF EVENT			BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF						
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.			
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)			
EVENT OF MARCH 24 - 27, 1969													
RG P36R02			RG P36R02										
3-24	0.0	0.002	3-24	140	0.0	0.0	3-24	215	0.910	0.0			
				240	0.1000	0.10		630	2.330	0.0064			
				345	0.1385	0.25		1300	5.450	0.0301			
				425	0.1350	0.34		1500	6.280	0.0411			
				530	0.0554	0.40		1600	6.490	0.0471			
WATERSHED CONDITIONS:													
Mixed cover, cultivated, 30%;			630 0.0400 0.44 2000 4.860 0.0684										
permanent pasture, usually a			720 0.0120 0.45 2100 10.240 0.0755										
good cover of native grass			800 0.0600 0.49 2200 15.870 0.0877										
mixture, 26%; farm woods, a			818 0.1000 0.52 2230 20.790 0.0963										
mixture of hardwoods and			840 0.1636 0.58 2300 26.130 0.1073										
pine, 37%; roads, 1%; idle,													
6%.													
				852	0.0	0.58		2400	34.530	0.1357			
				1016	0.0714	0.68	3-25	100	41.350	0.1713			
				1100	0.1227	0.77		200	43.530	0.2111			
				1130	0.1000	0.82		300	43.440	0.2519			
				1200	0.1000	0.87		430	30.090	0.3036			
				1210	0.1200	0.89		600	22.110	0.3403			
				1340	0.0200	0.92		700	16.450	0.3584			
				1600	0.0171	0.96		900	12.580	0.3856			
				1933	0.0	0.96		1130	9.230	0.4112			
				1934	1.1992	0.98		1800	6.060	0.4578			
				1936	7.5018	1.23		2200	5.230	0.4790			
				1940	1.2000	1.31		2400	5.020	0.4886			
				1944	0.4500	1.34	3-26	1800	3.830	0.5633			
				2010	0.0462	1.36		2400	3.670	0.5844			
				2033	0.0261	1.37							
				2035	1.4997	1.42							
				2055	0.1200	1.46							
				2130	0.1714	1.56							
				2210	0.2250	1.71							
				2232	0.1091	1.75							
				2240	0.0750	1.76							
				2302	0.0273	1.77							
				2315	0.4154	1.86							
				2340	0.0720	1.89							
				2400	0.0600	1.91							

NOTES: To convert CFS to IN/HR, multiply by 0.0009375.

1969 SELECTED RUNOFF EVENT			BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 24 - 27, 1969 (CONTINUED)										
3-24			30		0.0200	1.92				
			50		0.1200	1.96				
			115		0.0480	1.98				
			130		0.0800	2.00				

NOTES: To convert CFS to IN/HR, multiply by 0.0009375.



EVENT OF MARCH 24 - 27, 1969
BLACKSBURG VIRGINIA CHESTNUT BRANCH WATERSHED (13015)

KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38

LOCATION: Northumberland County, Pennsylvania 6 miles northeast of Klingerstown, Pennsylvania: Mahantango Creek Watershed, Susquehanna River Basin.

AREA: 1773.00 acres 2.77 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	1.04	0.81	1.85	3.54	3.75	4.92	4.96	2.94	3.27	1.75	4.75	3.38	36.95													
	Q	0.673	0.471	1.299	1.771	1.912	0.896	0.393	0.659	0.325	0.176	1.415	1.411	11.402													
STA AV	P	1.28	0.68	2.61	3.33	4.29	4.27	2.94	3.63	4.36	1.96	4.15	2.38	35.89													
	Q	1.008	1.017	2.058	1.405	1.639	1.101	0.313	0.467	0.759	0.197	1.609	1.290	12.862													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval										2 Days		8 Days							
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days											
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		6- 2	0.038	6- 2	0.035	6- 2	0.055	3-24	0.121	3-24	0.214	3-24	0.382	3-24	0.604	3-24	1.026										
MAXIMUMS FOR PERIOD OF RECORD																											
		9- 6	0.041	6- 2	0.035	9-10	0.060	9-10	0.133	9-10	0.234	3-23	0.429	3-23	0.719	3-17	1.821										
		1968		1969		1968		1968		1968		1968		1968		1968											

NOTES: Watershed conditions: Mixed cover area, 4-yr rotation of corn, small grain, small grain and native grasses, most of which is heavily contoured. Vegetative cover: corn, 20.4%; small grain, 20.0%; pasture, 4.0%; hay, 12.9%; vegetables, 0.7%; idle, 0.6%; orchard, 0.5%; homesteads and roads, 3.1%; forest, 37.8%. Precipitation and runoff records began Jan. 1, 1968. Precipitation data Thiessen weighted average for rain gages MB37 and ME37. Length of record 2 yr (1968-69). For long-time precipitation records, see U.S. Weather Bureau station records at Selinsgrove, CAA Airport, Pennsylvania.

1969 DAILY AIR TEMPERATURE (degrees F)														KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38													
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min			
1	18	7	35	29	33	25	52	37	65	39	84	65	82	49	84	63	88	68	74	58	56	49	34	31			
2	22	9	34	30	33	26	57	30	70	47	87	54	80	58	77	62	78	65	68	60	58	50	36	23			
3	30	8	36	16	43	26	55	34	83	57	67	42	79	54	80	63	71	65	69	55	59	55	39	27			
4	23	7	27	13	41	16	55	47	75	49	67	4	82	68	66	60	71	67	64	44	55	43	36	18			
5	21	11	26	9	35	21	58	39	71	40	74	58	87	67	77	57	78	69	64	42	50	36	30	22			
6	28	17	35	20	41	25	53	31	73	52	79	55	75	57	83	59	81	64	67	48	46	38	36	22			
7	25	17	33	17	35	20	66	43	73	54	74	55	64	57	85	64	83	65	67	54	43	39	37	23			
8	30	17	31	27	40	27	69	47	73	56	73	54	76	56	82	61	70	57	71	40	47	40	38	29			
9	41	12	31	15	38	25	71	57	64	40	74	47	78	59	78	64	70	51	69	46	50	39	38	32			
10	22	15	31	16	37	16	60	40	57	45	76	58	79	64	79	54	65	41	68	46	52	47	41	29			
11	23	11	38	24	26	13	56	31	55	35	76	66	85	64	77	57	69	45	71	55	55	46	52	37			
12	29	18	36	19	36	24	57	35	57	38	84	68	80	57	80	60	73	47	78	55	55	39	41	33			
13	32	23	27	13	37	28	61	38	63	43	85	67	80	58	82	58	79	55	77	64	51	30	41	26			
14	37	23	27	13	42	25	65	45	66	42	84	69	85	58	84	67	82	58	65	39	50	38	34	27			
15	33	11	31	18	40	20	57	53	70	52	78	56	87	63	85	72	80	59	59	39	45	24	32	29			
16	36	20	33	20	45	26	61	54	75	54	70	46	89	67	85	66	80	59	56	41	64	32	32	23			
17	37	29	39	22	58	36	76	58	79	57	72	54	91	66	86	65	85	47	53	34	41	29	27	23			
18	42	34	40	25	65	40	64	42	73	62	70	60	87	63	82	66	65	44	57	37	47	38	30	17			
19	38	24	38	28	64	40	45	37	69	63	80	60	84	66	81	61	62	49	63	46	54	42	34	26			
20	38	30	37	28	57	37	57	38	75	52	83	58	72	66	74	49	64	49	78	51	58	24	36	23			
21	40	32	43	27	48	35	63	44	67	50	73	55	82	64	75	46	69	40	57	43	32	18	30	12			
22	51	36	33	30	49	26	52	40	72	56	73	59	84	64	77	53	72	41	53	26	31	16	31	25			
23	45	39	34	31	55	36	45	38	63	57	74	59	68	62	81	57	74	53	40	18	36	29	31	14			
24	41	25	39	32	48	34	55	30	71	52	80	66	75	64	85	61	73	57	47	31	49	35	19	15			
25	29	13	38	25	53	36	67	47	73	46	80	65	70	66	87	62	69	43	57	25	44	26	22	0			
26	18	13	32	25	43	25	73	51	64	37	81	68	81	66	78	47	69	49	61	42	48	36	27	9			
27	25	5	36	25	41	21	81	56	68	48	85	71	83	67	74	49	74	49	49	35	47	26	27	21			
28	28	14	39	28	48	37	80	45	80	63	90	64	73	67	80	56	64	42	49	26	43	28	30	23			
29	35	26			48	25	62	40	89	66	82	60	84	64	84	61	61	41	51	26	45	29	36	22			
30	42	34			35	20	57	37	81	53	89	70	81	61	87	63	69	45	58	36	40	25	30	26			
31	46	29			39	19			79	59			84	65	88	66			56	49			32	29			
AV.	32	19	34	22	43	26	61	42	70	50	78	59	80	62	80	59	73	52	61	42	48	34	33	23			
MEAN	26.1		28.3		35.3		51.6		60.6		68.8		71.2		70.2		62.9		52.1		41.7		28.4				
STA AV	31	17	33	19	46	29	61	41	66	48	77	58	81	62	80	59	73	53	61	43	47	34	33	22			

NOTES: Temperature data taken daily with maximum and minimum thermometers, except on weekends and holidays, when data taken from hygrothermograph charts. The recording period is from 0930 for the date shown to 0930 the following day. Data recorded at MB37 meteorological station. STA AV based on 2 yr (1968-69) record period.

1969	DAILY PRECIPITATION (inches)					KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0	0.05	
2	0.0	0.05	0.09S	0.10	0.0	1.92	0.0	0.0	0.14	0.88	0.20	0.0	
3	0.0	0.20	0.02S	0.0	0.0	0.17	0.0	0.40	1.19	0.37	1.29	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.59	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.75	0.0	0.05	0.0	0.03	0.09	0.0	0.22	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.37	0.0	0.22	0.0	
7	0.10	0.0	0.05S	0.0	0.15	0.0	0.49	0.0	0.0	0.10	0.35	0.40	
8	0.0	0.0	0.0	0.0	0.10	0.05	0.01	0.05	0.35	0.0	0.59	0.0	
9	0.0	0.20S	0.0	0.0	1.10	0.05	0.0	0.14	0.0	0.0	0.33E	0.0	
10	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.11	0.0	0.0	0.14E	1.10	
11	0.0	0.0	0.0	0.0	0.05	0.0	0.05	0.0	0.0	0.0	0.0	0.04	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.05	0.0	0.05	0.30	
15	0.0	0.0	0.0	0.17	0.0	1.93	0.0	0.0	0.0	0.0	0.05	0.0	
16	0.0	0.0	0.0	0.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.0	0.22	0.0	0.0	0.0	
18	0.10	0.0	0.0	0.17	0.0	0.0	0.33	0.54	0.03	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.08	1.01	0.01	0.0	0.40	0.0	0.0	1.17	0.0	
20	0.0	0.10S	0.0	0.0	1.24	0.09	0.41	0.0	0.0	0.40	0.07	0.0	
21	0.0	0.0	0.0	0.05	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.21S	
22	0.0	0.0	0.0	0.72	0.0	0.0	0.10	0.0	0.05	0.0	0.0	0.69S	
23	0.0	0.13S	0.0	0.23	0.0	0.10	0.71	0.0	0.0	0.0	0.05	0.0	
24	0.10	0.03S	1.50	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.05	0.19	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.12S	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46E	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.79	0.0	0.15	0.0	0.0	0.0	
28	0.0	0.0	0.0	0.50	0.0	0.0	0.81	0.0	0.05	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.69S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	1.04	0.81	1.85	3.54	3.75	4.92	4.96	2.94	3.27	1.75	4.75	3.38	
STA AV	1.28	0.68	2.61	3.33	4.29	4.27	2.94	3.63	4.36	1.96	4.15	2.38	

NOTES: Precipitation values are Thiessen weighted average of rain gages MB37 and ME37. STA AV based on 2 yr (1968-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.492	2.114	0.887	3.114	3.722	1.759	0.685	2.207	0.374	0.364	0.293	1.476	
2	1.364	1.377	0.863	3.147	3.311	6.350	0.635	2.374	0.411	0.886	0.387	1.250	
3	1.342	2.299	1.395	2.691	3.038	8.376	0.609	2.716	1.876	1.266	1.183	1.251	
4	1.205	1.510	1.267	2.423	2.865	3.895	0.564	5.195	2.211	0.585	2.922	1.067	
5	1.233	1.132	1.014	4.570	2.565	2.998	0.556	6.084	1.235	0.555	1.315	0.918	
6	1.174	1.088	0.955	5.409	2.343	2.473	0.518	4.428	1.367	0.440	2.207	0.876	
7	1.256	1.073	0.906	4.742	2.218	2.047	0.731	3.131	1.212	0.475	2.713	0.944	
8	1.135	0.974	0.929	4.128	2.290	1.808	0.543	2.429	1.871	0.496	8.939	1.400	
9	1.211	0.966	0.912	3.666	6.381	1.610	0.489	2.030	1.537	0.412	9.582	1.219	
10	0.964	0.955	0.881	3.821	4.626	1.422	0.525	1.849	1.255	0.390	5.839	6.431	
11	0.965	0.933	0.772	3.186	4.462	1.304	0.481	1.402	1.044	0.408	4.023	23.194	
12	2.043	0.970	0.812	2.781	3.809	1.197	1.247	1.185	0.889	0.388	3.196	13.851	
13	0.774	0.768	0.819	2.506	3.316	1.107	0.642	1.048	0.797	0.390	2.477	8.014	
14	0.797	0.753	0.791	2.344	3.113	1.032	0.479	0.948	0.688	0.370	1.913	6.232	
15	0.742	0.704	0.745	2.282	2.768	5.697	0.451	0.934	0.630	0.339	1.549	4.639	
16	0.614	0.714	0.724	3.690	2.456	4.437	0.418	0.871	0.591	0.360	1.226	3.549	
17	0.600	0.745	0.740	3.209	2.242	2.748	0.588	0.815	0.623	0.339	1.062	3.019	
18	0.699	0.747	0.821	3.428	2.054	2.279	0.643	1.322	0.578	0.313	1.028	2.735	
19	0.815	0.710	0.948	3.887	2.608	1.956	0.540	1.329	0.486	0.331	6.511	2.299	
20	0.724	0.731	1.006	3.208	21.465	1.684	0.748	0.958	0.453	0.362	13.631	1.906	
21	0.742	2.205	1.109	3.254	16.360	1.287	0.615	0.808	0.441	0.569	8.883	1.762	
22	0.768	0.989	1.021	5.001	9.962	1.206	0.507	0.663	0.436	0.359	5.723	1.816	
23	0.798	1.186	0.958	8.719	7.126	1.265	1.431	0.610	0.437	0.329	4.284	1.683	
24	1.179	3.934	6.997	9.798	5.771	1.105	0.755	0.610	0.457	0.297	3.312	1.399	
25	0.828	2.374	25.889	8.652	4.702	1.449	0.633	0.579	0.420	0.314	2.504	1.296	
26	0.689	1.207	15.273	7.072	3.850	1.026	0.612	0.509	0.386	0.329	2.042	1.327	
27	0.609	0.962	8.802	5.856	3.268	0.924	1.315	0.438	0.384	0.305	1.793	1.670	
28	0.490	0.999	6.161	5.827	2.954	0.842	4.862	0.435	0.425	0.293	1.677	1.380	
29	0.561		4.992	5.309	2.596	0.774	3.007	0.429	0.356	0.284	1.640	1.273	
30	15.788		4.017	4.200	2.220	0.704	2.009	0.400	0.341	0.283	1.592	1.465	
31	6.510		3.347		1.942		1.448	0.373		0.283		3.781	
MEAN	1.6164	1.2542	3.1211	4.3972	4.5935	2.2254	0.9446	1.5841	0.8070	0.4231	3.5147	3.3906	
INCHES	0.673	0.471	1.299	1.771	1.912	0.896	0.393	0.659	0.325	0.176	1.415	1.411	
STA AV	1.008	1.017	2.058	1.405	1.639	1.101	0.313	0.467	0.759	0.197	1.609	1.290	

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.013426. Records are good. Some periods of winter records are affected by ice on control, no adjustments were made for these records. STA AV based on 2 yr (1968-69) record period.

1969 SELECTED RUNOFF EVENT			KLINGERSTOWN, PENNSYLVANIA				WATERSHED WE-38				
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF JULY 27 - 28, 1969											
7-27	RG 00ME37 0.10	0.005	7-27	RG 00ME37 1905	0.0	0.0	7-27	1505	0.49	0.0	
				1930	0.2400	0.10		1930	0.59	0.0013	
				1935	2.4001	0.30		1935	0.64	0.0013	
				1940	2.4003	0.50		1940	0.82	0.0013	
				1945	3.5994	0.80		1945	1.10	0.0013	
WATERSHED CONDITIONS:											
Mixed cover area, 4-yr				2050	0.0	0.80		1950	1.30	0.0014	
Rotation of corn, small grain,				2055	0.0	0.80		1955	1.71	0.0015	
small grain and native				2130	0.1714	0.90		2000	2.72	0.0016	
grasses, most of which is				2235	0.0	0.90		2005	4.12	0.0018	
heavily contoured. Vegetative			7-28	930	0.0	0.90		2010	5.25	0.0020	
cover: Corn, 20.4%; small											
grain, 20.0%; pasture, 4.0%;				1000	0.2000	1.00		2015	5.88	0.0023	
hay, 12.9%; vegetables, 0.7%;				1005	4.7999	1.40		2020	6.55	0.0026	
idle, 0.6%; orchard, 0.5%;				1010	1.2001	1.50		2025	7.52	0.0029	
homesteads and roads, 3.1%;				1115	0.0	1.50		2030	10.32	0.0033	
forest, 37.8%.				1225	0.0857	1.60		2035	12.27	0.0038	
				1330	0.0	1.60		2040	12.61	0.0044	
								2045	11.59	0.0050	
								2050	10.32	0.0055	
								2055	8.85	0.0059	
								2100	8.04	0.0063	
								2105	7.27	0.0067	
								2120	7.03	0.0077	
								2125	6.78	0.0080	
								2130	6.55	0.0083	
								2135	6.10	0.0086	
								2140	5.66	0.0089	
								2145	5.25	0.0092	
								2150	4.85	0.0094	
								2155	4.66	0.0096	
								2200	4.29	0.0098	
								2205	4.12	0.0100	
								2210	3.94	0.0102	
								2215	3.78	0.0104	
								2220	3.61	0.0106	
								2225	3.45	0.0108	
								2230	3.30	0.0110	
								2240	3.15	0.0113	
								2250	3.00	0.0116	
								2300	2.86	0.0119	
								2310	2.72	0.0122	
								2325	2.49	0.0126	
								2335	2.43	0.0128	
								2345	2.31	0.0130	
								2355	2.19	0.0132	
								2400	2.19	0.0133	
								7-28	10	2.08	0.0135
								20	2.02	0.0137	
								40	1.92	0.0141	
								100	1.81	0.0145	
								115	1.76	0.0148	
								135	1.66	0.0151	
								155	1.62	0.0154	
								235	1.48	0.0160	
								335	1.39	0.0168	
								450	1.26	0.0177	
								615	1.18	0.0187	
								835	1.14	0.0202	
								955	1.22	0.0211	
								1000	1.26	0.0212	
								1005	1.76	0.0213	
								1010	2.25	0.0214	
								1015	2.72	0.0215	
								1020	3.78	0.0216	
								1025	6.10	0.0218	
								1030	8.58	0.0222	
								1035	10.95	0.0226	
								1040	13.31	0.0232	
								1045	19.41	0.0240	
								1050	22.74	0.0250	
								1055	23.73	0.0261	
								1110	24.26	0.0295	
								1115	25.85	0.0307	
								1120	27.51	0.0319	
								1125	28.07	0.0332	
								1135	27.51	0.0358	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000559.

1969	SELECTED RUNOFF EVENT			KLINGERSTOWN, PENNSYLVANIA			WATERSHED WE-38			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 27 - 28, 1969 (CONTINUED)										
							7-28	1140	26.38	0.0370
								1145	24.79	0.0382
								1150	22.74	0.0393
								1155	21.25	0.0403
								1200	19.41	0.0413
								1205	17.65	0.0422
								1210	16.00	0.0430
								1215	14.42	0.0437
								1220	13.31	0.0443
								1225	12.61	0.0449
								1230	12.27	0.0455
								1235	11.59	0.0460
								1240	10.95	0.0465
								1245	10.32	0.0470
								1250	10.01	0.0475
								1255	9.72	0.0480
								1300	9.42	0.0485
								1305	9.14	0.0489
								1315	8.85	0.0497
								1330	8.58	0.0509
								1335	8.30	0.0513
								1345	8.04	0.0521
								1355	7.78	0.0528
								1400	7.52	0.0532
								1410	7.27	0.0539
								1420	7.03	0.0546
								1430	6.78	0.0552
								1445	6.55	0.0561
								1500	6.32	0.0570
								1510	6.10	0.0576
								1525	5.88	0.0584
								1535	5.66	0.0589
								1545	5.45	0.0594
								1600	5.25	0.0601
								1620	5.04	0.0611
								1640	4.85	0.0620
								1710	4.66	0.0633
								1745	4.47	0.0648
								1820	4.29	0.0662
								1910	4.12	0.0682
								2025	3.94	0.0710
								2250	3.78	0.0762
								2400	3.78	0.0787

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000559.

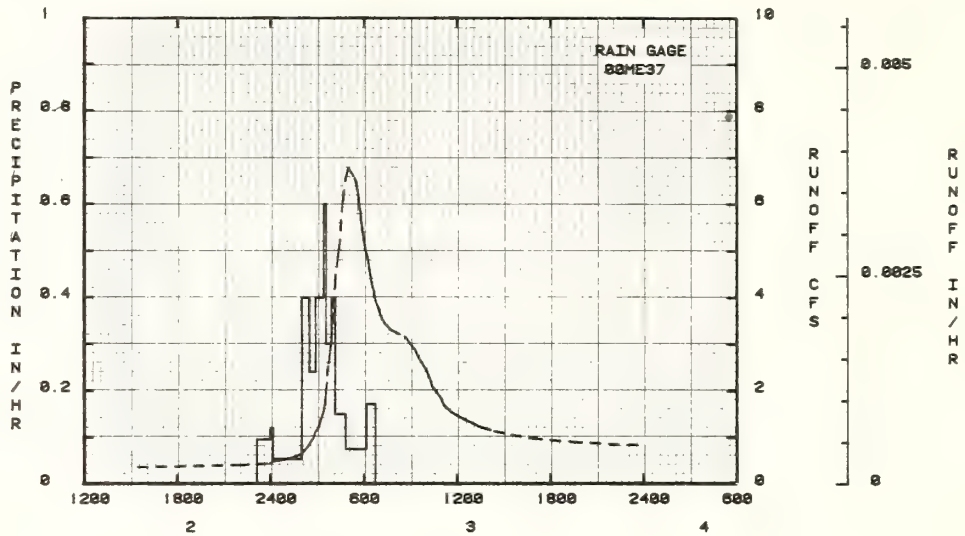
EVENT OF JULY 27 - 28, 1969
KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38

1969			SELECTED RUNOFF EVENT			KLINGBERTOWN, PENNSYLVANIA			WATERSHED WR-38		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF SEPTEMBER 2 - 3, 1969											
9- 2	RG 00MR37 0.10	0.004	9- 2	RG 00MR37 2310	0.0	0.0	9- 2	1530	0.37	0.0	
				2400	0.0960	0.08		2200	0.41	0.0014	
			9- 3	10	0.1200	0.10		2400	0.45	0.0019	
				200	0.0545	0.20	9- 3	20	0.50	0.0020	
				215	0.4000	0.30		110	0.55	0.0022	
WATERSHED CONDITIONS:											
Mixed cover area, 4-yr				230	0.4000	0.40		140	0.60	0.0024	
rotation of corn, small grain,				255	0.2400	0.50		200	0.65	0.0025	
small grain and native				310	0.4000	0.60		210	0.71	0.0026	
grasses, most of which is				325	0.4000	0.70		220	0.77	0.0027	
heavily contoured. Vegetative				335	0.5999	0.80		230	0.84	0.0028	
cover: Corn, 20.4%; small											
grain, 20.0%; pasture, 4.0%;				355	0.3000	0.90		235	0.90	0.0028	
hay, 12.9%; vegetables, 0.7%;				410	0.4000	1.00		245	0.98	0.0029	
idle, 0.6%; orchard, 0.5%;				450	0.1500	1.10		250	1.05	0.0029	
homesteads and roads, 3.1%;				610	0.0750	1.20		255	1.13	0.0029	
forest, 37.8%.				645	0.1714	1.30		305	1.21	0.0030	
								310	1.29	0.0031	
								315	1.38	0.0032	
								320	1.47	0.0033	
								325	1.56	0.0034	
								330	1.76	0.0035	
								335	1.98	0.0036	
								340	2.33	0.0037	
								345	2.59	0.0038	
								350	2.86	0.0039	
								355	3.15	0.0040	
								400	3.45	0.0042	
								405	3.78	0.0044	
								410	4.29	0.0046	
								415	4.66	0.0048	
								420	4.85	0.0050	
								425	5.04	0.0052	
								430	5.45	0.0055	
								435	5.88	0.0058	
								440	6.10	0.0061	
								450	6.55	0.0067	

NOTES: To convert runoff in CFS to IN/DAY, multiply by 0.000559.

1969 SELECTED RUNOFF EVENT			KLINGERTOWN, PENNSYLVANIA			WATERSHED WE-38		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day
								Rate
								(cfs)
								Acc.
								(inches)
EVENT OF SEPTEMBER 2 - 3, 1969 (CONTINUED)								
				9- 3			500	6.78
							525	6.55
							535	6.32
							540	6.10
							545	5.88
							550	5.66
							555	5.45
							600	5.25
							605	5.04
							615	4.85
							620	4.66
							625	4.47
							630	4.29
							640	4.12
							645	3.94
							655	3.78
							705	3.61
							720	3.45
							745	3.30
							840	3.15
							900	3.00
							920	2.86
							930	2.72
							945	2.59
							1000	2.46
							1010	2.33
							1020	2.21
							1025	2.09
							1040	1.98
							1055	1.87
							1105	1.76
							1115	1.66
							1135	1.56
							1200	1.47
							1230	1.38
							1305	1.29
							1335	1.21
							1425	1.13
							1530	1.05
							1650	0.98
							1925	0.90
							2300	0.84
							2400	0.84

NOTES: To convert runoff in CFS to IN/DAY, multiply by 0.000559.



EVENT OF SEPTEMBER 2 - 3, 1969
KLINGERSTOWN, PENNSYLVANIA WATERSHED WE-38

MCCREDIE, MISSOURI STATION RESERVOIR W-1

LOCATION: Callaway County, Mo.; 1 mi. S.E. of McCredie; Crows Fork Creek, Auxvasse Watershed, Missouri River Basin.

AREA: 153.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														MCCREDIE, MISSOURI STATION RESERVOIR W-1													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	4.07	1.56	2.08	4.68	6.50	11.45	7.17	0.69	7.39	10.48	1.02	1.28	58.40													
	Q	3.038	1.319	1.032	1.876	2.560	6.833	4.545	0.0	1.249	7.412	0.334	0.0	30.198													
STA AV	P	1.47	1.60	2.67	3.66	4.19	4.59	3.68	2.77	3.71	3.70	1.95	1.65	35.64													
	Q	0.531	0.676	1.134	1.091	0.838	0.921	0.563	0.133	0.428	1.155	0.398	0.357	8.226													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge Date Rate	1 Hour Date Vol.	2 Hours Date Vol.	Maximum Volume for Selected Time Interval	6 Hours Date Vol.	12 Hours Date Vol.	1 Day Date Vol.	2 Days Date Vol.	8 Days Date Vol.																	
1969		10-11 0.695	10-11 0.589	10-11 0.995	10-12 2.019	10-11 3.502	10-11 5.466	10-10 6.220	10-10 6.836																		
MAXIMUMS FOR PERIOD OF RECORD																											
		10-13 2.269	10-13 1.365	10-13 2.236	10- 4 3.960	10- 4 7.000	10- 3 7.775	10- 3 8.090	10- 2 8.840																		
		1968	1968	1968	1941	1941	1941	1941	1941																		

NOTES: Watershed conditions: 58% Pasture and meadow; 12% alfalfa; 20% corn; 4% grain sorghum; and 6% roads and farmsteads. Precipitation Thiessen average of 4 recording gages and 1 non-recording gage. Precipitation and runoff records began Jan. 1, 1941. Runoff amounts, or rates, which are reported as inches or inches per hour, respectively, were computed with a constant watershed area of 153 acres, including reservoir surface area. Previous published runoff amounts and rates were computed with a variable watershed area equal to the total area less the reservoir surface area, which was a function of reservoir stage. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 25.1-13. For long-time precipitation records, see U.S. Weather Bureau records at Columbia, Missouri (1890-1969).

1969 DAILY AIR TEMPERATURE (degrees F)														MCCREDIE, MISSOURI STATION RESERVOIR W-1													
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min			
1	25	4	38	19	41	27	79	42	80	46	75	52	81	62	84	63	87	64	85	62	49	43	49	32			
2	40	6	37	27	44	25	72	39	82	50	65	48	86	64	84	58	84	64	81	60	45	42	57	30			
3	34	8	38	17	45	25	60	38	82	53	73	47	90	69	84	58	81	64	88	58	46	40	49	31			
4	16	-2	50	25	44	24	74	54	79	53	76	53	91	76	83	57	82	66	88	60	46	35	42	21			
5	38	9	49	28	47	24	71	45	80	60	81	62	91	72	87	61	88	67	86	64	63	32	40	26			
6	32	31	43	37	48	31	64	39	78	62	88	65	90	68	90	65	88	70	61	58	69	39	38	30			
7	32	12	46	33	49	33	77	42	78	60	88	60	88	70	90	68	83	64	72	48	67	41	34	31			
8	44	22	46	33	45	21	82	55	71	52	86	62	91	70	92	71	79	60	73	45	65	42	35	20			
9	33	8	33	25	25	7	75	57	62	44	71	54	91	76	92	74	76	52	77	49	64	36	44	28			
10	24	5	50	24	30	12	71	48	61	46	77	52	89	68	83	62	74	45	79	58	64	38	38	29			
11	32	10	47	30	26	8	71	42	62	39	86	64	89	70	85	59	76	56	79	50	58	46	36	28			
12	33	14	39	18	34	8	70	46	70	39	86	64	92	71	85	60	85	54	70	53	56	34	38	23			
13	40	18	36	18	38	20	67	48	70	50	76	52	96	71	84	60	84	59	47	44	48	33	56	32			
14	42	26	37	26	37	21	60	54	72	57	71	49	90	70	84	64	85	63	54	35	33	19	50	31			
15	40	30	34	26	43	18	74	46	81	50	67	51	89	68	85	66	69	64	60	40	61	23	31	27			
16	47	39	35	23	54	24	83	55	81	56	74	48	94	71	80	66	69	65	60	43	63	28	38	20			
17	39	32	41	23	64	32	82	58	76	58	74	53	92	71	82	65	76	63	54	32	66	50	39	22			
18	35	30	41	22	69	37	68	43	74	48	74	59	92	71	89	62	76	52	54	39	60	33	42	34			
19	37	27	43	22	73	39	58	40	76	48	82	62	84	71	91	70	74	51	75	45	42	21	37	26			
20	39	27	40	24	73	41	70	37	75	57	81	61	85	70	91	70	75	49	65	57	40	27	30	16			
21	42	34	42	34	52	25	70	52	72	56	73	54	86	68	80	67	80	52	69	39	58	26	33	28			
22	50	38	41	32	69	36	68	45	68	48	76	63	87	67	80	56	82	60	68	39	59	38	30	22			
23	51	18	37	33	67	43	64	42	56	49	83	64	89	67	81	55	79	61	51	32	55	35	30	24			
24	18	7	41	38	40	38	66	36	62	51	83	65	89	70	86	59	70	46	57	35	57	26	30	21			
25	22	8	47	32	38	32	75	42	76	43	86	71	87	64	84	59	75	46	65	38	54	37	34	28			
26	22	12	44	33	42	28	78	54	82	53	89	76	90	67	85	61	81	51	64	48	54	26	32	16			
27	30	20	43	35	43	27	74	57	83	57	89	67	90	65	86	60	80	61	50	30	51	31	28	20			
28	48	30	41	31	56	35	56	43	85	59	89	66	78	62	89	62	75	49	52	28	40	25	34	27			
29	38	32			41	21	61	35	87	60	90	65	84	61	90	63	84	54	53	31	42	27	32	26			
30	38	24			37	22	67	43	87	62	84	73	83	60	90	63	85	63	50	44	57	27	26	23			
31	34	26			48	25			80	64			85	68	90	60			54	47							
AV.	35	19	41	27	47	26	70	45	75	52	79	59	88	68	86	62	79	57	65	45	54	33	37	25			
MEAN	27.5		34.5		36.7		58.1		63.9		69.6		78.4		74.4		68.7		55.7		43.9		31.5				
STA AV	39	20	43	23	52	30	67	43	75	52	83	61	88	65	88	63	81	55	70	45	54	33	41	24			

NOTES: Temperature data taken daily with the maximum and minimum thermometers, except on weekends and holidays, when data taken from hygrothermograph charts. The recording period is from 1700 of the previous day to 1700 of the day on which values are recorded. STA AV based on 29 yr (1941-1969) record period.

1969	DAILY PRECIPITATION (inches)					MCCREDIE, MISSOURI STATION RESERVOIR W-1						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.94	0.23	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.04	0.0	0.0	1.30	0.25	0.0	0.01	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	1.12	0.0	0.19	0.0	0.0	0.64	0.0	0.0	0.0
5	0.06	0.0	0.0	0.12	0.80	0.04	0.48	0.0	0.0	0.30	0.0	0.0
6	0.0	0.0	0.0	0.0	0.43	0.0	1.02	0.0	0.61	0.16	0.0	0.42
7	0.0	0.11	0.05	0.0	0.08	0.0	0.51	0.0	0.33	0.0	0.0	0.24
8	0.0	0.50	0.45	0.01	0.35	1.07	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.10	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	1.64	0.0	0.0	1.96	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	2.36	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.80	0.0	0.0
13	0.0	0.0	0.0	0.10	0.42	0.0	0.0	0.08	0.0	0.16	0.0	0.0
14	0.0	0.0	0.0	0.23	0.0	2.43	0.35	0.0	0.0	0.0	0.0	0.0
15	0.34	0.05	0.0	0.0	0.65	0.0	0.0	0.15	3.02	0.0	0.0	0.0
16	0.74	0.0	0.0	0.28	0.0	0.0	0.0	0.01	2.14	0.0	0.05	0.0
17	0.19	0.0	0.0	0.52	0.16	0.18	0.0	0.0	0.0	0.0	0.64	0.0
18	0.0	0.0	0.0	0.66	0.06	0.50	0.05	0.0	0.0	0.45	0.33	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.0	0.0	0.0	0.0	0.0
20	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.08	0.0	0.0
21	0.12	0.48	0.0	0.0	0.72	0.25	0.0	0.0	0.0	0.0	0.0	0.05
22	0.02	0.37	0.0	0.0	0.04	1.92	0.0	0.0	0.0	0.0	0.0	0.05
23	0.99	0.0	1.14	0.0	0.0	0.09	0.0	0.0	0.07	0.0	0.0	0.13
24	0.0	0.0	0.45	0.0	0.0	0.87	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.35	0.0	0.0	0.66	0.0	0.0	0.52	0.0	0.0	0.0	0.0	0.0
27	0.01	0.04	0.0	0.84	0.0	0.36	0.02	0.0	0.45	0.0	0.0	0.09
28	0.18	0.02	0.0	0.0	0.0	1.09	0.0	0.0	0.0	0.0	0.0	0.20
29	0.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.83	1.51	0.0	0.0	0.0	1.10	0.0	0.09
31	0.0	0.0	0.0	0.0	1.95	0.0	0.0	0.0	0.0	0.10	0.0	0.0
TOTAL	4.07	1.56	2.08	4.68	6.50	11.45	7.17	0.69	7.39	10.48	1.02	1.28
STA AV	1.47	1.60	2.67	3.66	4.19	4.59	3.68	2.77	3.71	3.70	1.95	1.65

NOTES: Precipitation data are Thiessen weighted values for 4 recording rain gages and 1 non-recording rain gage. STA AV values are for 29 yr (1941-1969) record period.

1969	MEAN DAILY DISCHARGE (cfs)					MCCREDIE, MISSOURI STATION RESERVOIR W-1						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.223	0.0	0.0	0.0	5.341	3.475	0.0	0.0	0.0	0.236	0.0
2	0.0	0.138	0.0	0.0	0.0	0.037	7.174	0.0	0.0	0.0	0.168	0.0
3	0.0	0.035	0.0	0.0	0.0	0.0	0.226	0.0	0.0	0.0	0.0	0.0
4	0.0	0.250	0.0	1.883	0.0	0.043	0.227	0.0	0.070	0.0	0.0	0.0
5	0.0	0.373	0.0	1.928	0.191	0.041	0.195	0.0	0.0	0.0	0.0	0.0
6	0.0	0.572	0.0	0.139	0.950	0.0	3.162	0.0	0.0	0.0	0.0	0.0
7	0.0	0.324	0.007	0.026	0.212	0.0	2.817	0.0	0.0	0.0	0.0	0.0
8	0.0	3.557	0.196	0.0	0.485	1.249	0.590	0.0	0.0	0.0	0.0	0.0
9	0.0	0.128	0.0	0.0	0.0	0.077	0.218	0.0	0.0	0.0	0.0	0.0
10	0.0	0.094	0.0	0.0	0.0	0.0	9.826	0.0	0.0	3.081	0.0	0.0
11	0.0	0.075	0.0	0.0	0.0	0.0	0.377	0.0	0.0	11.716	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.231	0.0	0.0	26.470	0.0	0.0
13	0.0	0.0	0.0	0.0	0.104	0.0	0.101	0.0	0.0	2.017	0.0	0.0
14	0.0	0.0	0.0	0.081	0.050	9.465	0.125	0.0	0.0	0.271	0.0	0.0
15	0.564	0.0	0.0	0.0	0.881	0.400	0.0	0.0	0.491	0.184	0.0	0.0
16	4.670	0.0	0.0	0.027	0.401	0.120	0.0	0.0	6.509	0.031	0.0	0.0
17	1.064	0.0	0.0	0.220	0.157	0.151	0.0	0.0	0.876	0.0	0.079	0.0
18	0.379	0.0	0.0	3.542	0.109	1.452	0.0	0.0	0.079	0.423	1.582	0.0
19	0.093	0.0	0.0	0.321	0.075	0.141	0.471	0.0	0.0	0.371	0.084	0.0
20	0.013	0.0	0.0	0.094	0.0	0.059	0.0	0.0	0.0	0.161	0.0	0.0
21	1.501	0.046	0.0	0.0	0.445	0.092	0.0	0.0	0.0	0.076	0.0	0.0
22	0.274	1.036	0.0	0.0	1.266	10.425	0.0	0.0	0.0	0.0	0.0	0.0
23	4.656	1.000	2.018	0.0	0.205	0.145	0.0	0.0	0.0	0.0	0.0	0.0
24	0.108	0.356	3.904	0.0	0.199	5.559	0.0	0.0	0.0	0.0	0.0	0.0
25	0.049	0.160	0.378	0.0	0.117	0.158	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.116	0.052	0.028	0.0	0.038	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.081	2.583	0.0	0.186	0.0	0.0	0.0	0.0	0.0	0.0
28	0.328	0.0	0.0	0.833	0.0	3.762	0.0	0.0	0.0	0.0	0.0	0.0
29	5.212	0.0	0.0	0.239	0.0	0.496	0.0	0.0	0.0	0.0	0.0	0.0
30	0.570	0.0	0.114	0.364	0.0	4.484	0.0	0.0	0.0	1.243	0.0	0.0
31	0.046	0.0	0.0	10.242	0.0	0.0	0.0	0.0	0.0	1.597	0.0	0.0
MEAN	0.6299	0.3029	0.2141	0.4020	0.5308	1.4641	0.9824	0.0	0.2675	1.5368	0.0716	0.0
INCHES	3.038	1.319	1.032	1.876	2.560	6.833	4.545	0.0	1.249	7.412	0.334	0.0
STA AV	0.531	0.676	1.134	1.091	0.838	0.921	0.563	0.133	0.428	1.155	0.398	0.357

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.155566. STA AV values are for 29 yr (1941-1969) record period.

1969 SELECTED RUNOFF EVENT			MCCREDIE, MISSOURI STATION RESERVOIR W-1							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JUNE 14 - 15, 1969										
RG 000004			RG 000004							
6-14	0.0	0.0	6-14	924	0.0	0.0	6-14	1123	0.0	0.0
				928	1.6500	0.11		1144	7.320	0.0083
				933	2.8801	0.35		1200	16.380	0.0288
				1000	0.0889	0.39		1220	25.820	0.0744
				1047	0.0	0.39		1240	36.140	0.1413
WATERSHED CONDITIONS: 58% Pasture and meadow, 8-12 in. tall; 12% alfalfa, 12-14 in. tall; 20% corn, 4-6 in. tall; 4% grain sorghum, 2-4 in. tall; 6% roads and farmstead.				1050	0.1999	0.40		1300	34.180	0.2173
				1110	0.0300	0.41		1320	27.820	0.2843
				1115	2.1601	0.59		1340	26.120	0.3426
				1118	4.6000	0.82		1400	25.250	0.3981
				1123	1.2001	0.92		1420	26.300	0.4538
				1136	0.0461	0.93		1440	32.850	0.5177
				1138	2.6999	1.02		1500	45.110	0.6020
				1142	0.3001	1.04		1520	54.830	0.7099
				1148	2.0000	1.24		1540	50.810	0.8240
				1158	0.0600	1.25		1600	44.130	0.9266
				1202	1.0501	1.32		1620	38.850	1.0162
				1207	0.1199	1.33		1640	29.750	1.0903
				1213	0.3000	1.36		1700	23.420	1.1478
				1252	0.0308	1.38		1720	19.260	1.1939
				1310	0.2334	1.45		1740	16.360	1.2324
				1330	0.3300	1.56		1800	13.170	1.2643
				1350	0.2400	1.64		1820	11.230	1.2907
				1408	0.1666	1.69		1840	9.300	1.3129
				1421	0.3692	1.77		1900	7.700	1.3313
				1434	0.4154	1.86		2000	6.680	1.3779
				1443	0.6667	1.96		2100	4.710	1.4148
				1452	0.7333	2.07		2200	2.820	1.4392
				1505	0.3231	2.14		2300	2.500	1.4564
				1530	0.2640	2.25		2400	2.520	1.4727
				1600	0.0400	2.27	6-15	100	1.370	1.4853
				1700	0.0700	2.34		200	0.920	1.4927
				1800	0.0400	2.38		300	0.640	1.4977
				1830	0.0200	2.39		400	0.970	1.5029
				1900	0.0200	2.40		500	0.850	1.5088
								600	0.370	1.5128
								700	0.440	1.5154
								800	0.530	1.5186
								900	0.0	1.5203

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00648. Event precipitation totals for rain gages R-2, R-3, S-6, and R-8 are 2.40, 2.53, 2.44 and 2.50 respectively and the Thiessen average event precipitation is 2.43 inches.

EVENT OF JUNE 14 - 15, 1969

MCCREDIE, MISSOURI STATION RESERVOIR W-1

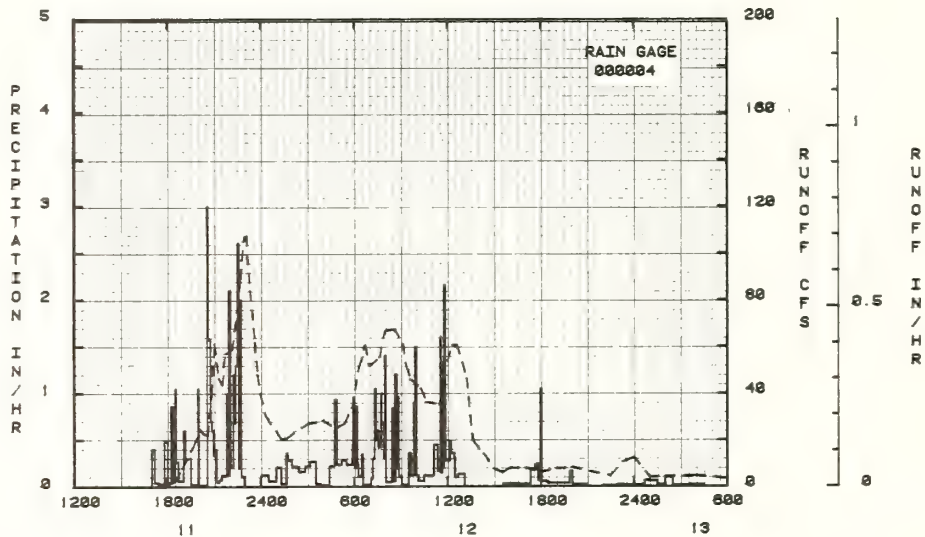
1969			SELECTED RUNOFF EVENT			MCCREDIE, MISSOURI			STATION RESERVOIR W-1		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF OCTOBER 11 - 13, 1969											
10-11	RG 000004 0.02	0.200	10-11	RG 000004 1700	0.0	0.0	10-11	1700	0.0	0.0	
				1712	0.4000	0.08		1752	0.410	0.0012	
				1726	0.0428	0.09		1832	2.490	0.0075	
				1750	0.0250	0.10		1900	8.130	0.0236	
				1801	0.4909	0.19		1940	17.080	0.0779	
WATERSHED CONDITIONS:											
58% Pasture and meadow, 8-12 in. tall; 12% alfalfa, 8-10 in. tall; 20% mature corn; 4% mature grain sorghum; 6% roads and farmstead.				1815	0.0428	0.20		2008	24.470	0.1410	
				1822	0.8573	0.30		2020	22.580	0.1714	
				1830	0.0750	0.31		2036	21.890	0.2097	
				1834	1.0501	0.38		2052	39.810	0.2628	
				1843	0.2666	0.42		2104	61.010	0.3292	
				1903	0.0600	0.44		2120	46.380	0.4217	
				1911	0.6000	0.52		2134	43.460	0.4899	
				1927	0.3000	0.60		2145	57.050	0.5497	
				1931	0.2998	0.62		2212	58.870	0.7185	
				1958	0.0222	0.63		2232	76.020	0.8637	
				2002	1.0499	0.70		2244	89.070	0.9703	
				2035	0.0182	0.71		2258	106.810	1.1191	
				2039	3.0000	0.91		2308	107.340	1.2357	
				2047	1.5750	1.12		2320	83.720	1.3591	
				2053	0.7000	1.19		2340	61.640	1.5155	
				2058	0.6001	1.24		2350	47.860	1.5751	
				2107	0.3333	1.29		2400	39.600	1.6227	
				2110	0.4001	1.31	10-12	20	30.310	1.6979	
				2122	0.0500	1.32		120	20.460	1.8625	
				2130	0.0750	1.33		140	20.820	1.9069	
				2150	0.1200	1.37		300	26.920	2.1136	
				2153	1.0000	1.42		400	28.370	2.2928	
				2158	0.1199	1.43		448	25.040	2.4308	
				2204	2.0999	1.64		524	27.110	2.5325	
				2215	0.2181	1.68		552	33.800	2.6243	
				2218	1.2005	1.74		620	51.410	2.7537	
				2225	0.6857	1.82		644	60.590	2.8983	
				2231	1.2998	1.95		700	51.640	2.9963	
				2237	2.6003	2.21		740	55.740	3.2274	
				2243	0.1999	2.23		800	66.890	3.3609	

1969			SELECTED RUNOFF EVENT			MCCREDIE, MISSOURI			STATION RESERVOIR W-1		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF OCTOBER 11 - 13, 1969 (CONTINUED)											
10-11			2246		2.0000	2.33	10-12	836	67.430	3.6211	
			2257		0.1091	2.35		910	61.010	3.8569	
10-12			1		0.0	2.35		922	51.710	3.9297	
			30		0.1241	2.41		940	45.820	4.0248	
			100		0.0600	2.44		1020	41.900	4.2147	
			120		0.2100	2.51		1040	36.140	4.2987	
			140		0.0300	2.52		1132	35.230	4.4993	
			145		0.3600	2.55		1142	46.370	4.5437	
			200		0.2800	2.62		1220	60.590	4.7631	
			225		0.2160	2.71		1238	60.660	4.8813	
			251		0.1615	2.78		1300	52.990	5.0166	
			310		0.2211	2.85		1316	46.250	5.1020	
			332		0.2727	2.95		1328	30.360	5.1515	
			350		0.0334	2.96		1340	19.340	5.1836	
			425		0.0171	2.97		1420	14.000	5.2558	
			444		0.2210	3.04		1500	7.710	5.3028	
			453		0.9333	3.18		1530	5.940	5.3249	
			511		0.2334	3.25		1600	8.050	5.3476	
			530		0.2842	3.34		1700	8.010	5.3997	
			553		0.2348	3.43		1800	6.280	5.4460	
			557		0.4502	3.46		1900	7.770	5.4915	
			602		0.9598	3.54		2000	8.180	5.5432	
			605		0.2002	3.55		2228	4.720	5.6463	
			612		0.8571	3.65		2320	10.860	5.6901	
			617		0.2401	3.67		2400	12.520	5.7407	
			628		0.1091	3.69	10-13	100	4.100	5.7946	
			635		0.3428	3.73		200	4.280	5.8218	
			705		0.0200	3.74		400	4.590	5.8793	
			712		0.0857	3.75		600	3.210	5.9299	
			720		0.2999	3.79		756	2.470	5.9654	
			724		1.0501	3.86		900	2.290	5.9819	
			730		0.5000	3.91		1240	0.810	6.0187	
			734		0.5999	3.95		1600	0.420	6.0320	
			744		0.4200	4.02					
			747		1.0001	4.07					
			755		0.6750	4.16					
			759		0.2998	4.18					
			802		1.4001	4.25					
			825		0.0522	4.27					
			830		0.8399	4.34					
			840		0.0601	4.35					
			845		1.1999	4.45					
			848		0.2002	4.46					
			853		0.9598	4.54					
			904		0.1091	4.56					
			930		0.0231	4.57					
			940		0.3600	4.63					
			950		0.1199	4.65					
			956		0.9001	4.74					
			1000		1.4998	4.84					
			1010		0.1200	4.86					
			1030		0.0600	4.88					
			1100		0.1200	4.94					
			1110		0.1200	4.96					
			1122		0.4500	5.05					
			1133		0.1636	5.08					
			1136		1.6000	5.16					
			1140		0.1499	5.17					
			1145		1.3200	5.28					
			1148		0.1999	5.29					
			1153		2.1601	5.47					
			1210		0.2824	5.55					
			1215		0.4799	5.59					
			1225		0.3600	5.65					
			1229		0.3001	5.67					
			1241		0.1000	5.69					
			1307		0.1385	5.75					
			1534		0.0	5.75					
			1630		0.0321	5.78					
			1720		0.0240	5.80					
			1740		0.1800	5.86					
			1750		0.2400	5.90					
			1759		0.0667	5.91					
			1803		1.0499	5.98					
			1825		0.0546	6.00					

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00648. Event precipitation totals for rain gages R-2, R-3, S-6 and R-8 are 6.49, 6.30, 6.26, 6.35 respectively and the Thiessen average event precipitation is 6.32 inches.

1969 SELECTED RUNOFF EVENT			MCCREDIE, MISSOURI STATION RESERVOIR W-1						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF OCTOBER 11 - 13, 1969 (CONTINUED)									
10-12				1952	0.0345	6.05			
				2003	0.1636	6.08			
				2030	0.0222	6.09			
				2100	0.0200	6.10			
				2200	0.0	6.10			
10-13				2253	0.0113	6.11			
				2320	0.0222	6.12			
				2400	0.0150	6.13			
	42				0.0143	6.14			
	100				0.0667	6.16			
				130	0.0600	6.19			
				200	0.0200	6.20			
				230	0.1000	6.25			
				330	0.0100	6.26			
				430	0.0200	6.28			

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00648. Event precipitation totals for rain gages R-2, R-3, S-6 and R-8 are 6.49, 6.30, 6.26, 6.35 respectively and the Thiessen average event precipitation is 6.32 inches.



EVENT OF OCTOBER 11 - 13, 1969
MCCREDIE, MISSOURI STATION RESERVOIR W-1

COSHOCTON, OHIO WATERSHED 102

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.26 acres

SOILS: (Revision) Dekalb channery sandy loam - 69 percent; Rayne silt loam - 31 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, USDA Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. & McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)								COSHOCTON, OHIO WATERSHED 102								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
1969	P	2.39	0.73	1.50	2.27	2.83	5.28	11.67	2.15	1.47	2.14	2.71	2.54	37.68		
	Q	0.0	0.0	0.0	0.0	0.0	0.0	3.402	0.0	0.0	0.0	0.0	0.0	3.402		
STA AV	P	1.85	2.22	4.07	3.27	3.95	4.65	4.34	3.13	2.31	2.32	2.43	2.28	36.82		
	Q	0.046	0.062	0.125	0.054	0.009	0.163	0.190	0.036	0.018	0.009	0.001	0.0	0.712		
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		2 Days		8 Days		
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	
1969		7-27	2.503	7- 5	0.960	7- 5	1.427	7- 5	2.470	7- 5	2.470	7- 5	2.470	7- 5	2.470	6-29 2.597
MAXIMUMS FOR PERIOD OF RECORD																
		6-12	3.640	6-12	1.310	7- 5	1.427	7- 5	2.470	7- 5	2.470	7- 5	2.470	7- 5	2.470	6-29 2.597
		1957		1957		1969		1969		1969		1969		1969		1969

NOTES: Watershed conditions: Cover of improved practice alfalfa meadow. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.1-4. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.1-1 and 26.30-3. Precipitation data from rain gage Y101. Precipitation and runoff records began April 1937. Watershed discontinued Jan. 1, 1947 to Apr. 30, 1957 and Sept. 1, 1957 to March 29, 1960. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 102	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	1.22	0.0			
2	0.0	0.03M	0.0	0.18	0.0	0.95	0.0	0.0	0.12	1.21	0.23	0.0			
3	0.0	0.04M	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.06	0.0			
4	0.0	0.0	0.0	0.10	0.0	0.0	0.35	0.0	0.0	0.0	0.06	0.0			
5	0.0	0.0	0.0	0.60	0.0	0.12	4.72	0.0	0.25	0.0	0.0	0.0			
6	0.0	0.07S	0.0	0.0	0.0	0.0	0.0	0.0	0.65	0.0	0.0	0.0			
7	0.0	0.0	0.0	0.0	0.0	0.0	0.82	0.0	0.0	0.11	0.0	0.51			
8	0.10	0.45	0.0	0.0	1.25	0.21	0.0	0.20	0.0	0.0	0.0	0.0			
9	0.08	0.05M	0.0	0.05	0.25	0.0	0.0	0.87	0.0	0.0	0.0	0.0			
10	0.0	0.0	0.06S	0.09	0.51	0.0	0.59	0.0	0.0	0.0	0.0	0.41			
11	0.0	0.0	0.07S	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.15M			
12	0.0	0.09S	0.0	0.0	0.0	0.57	0.0	0.0	0.0	0.0	0.0	0.0			
13	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.02	0.08M	0.03S			
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.08	0.08M	0.07S			
15	0.0	0.0	0.0	0.15	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.04S			
16	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
17	0.39	0.0	0.0	0.0	0.05	0.0	0.07	0.04	0.30	0.0	0.04	0.0			
18	0.35	0.0	0.0	0.48	0.30	0.05	0.0	0.0	0.0	0.0	0.05	0.01E			
19	0.0	0.0	0.0	0.0	0.03E	0.0	0.40	1.04	0.0	0.0	0.69S	0.0			
20	0.09	0.0	0.23	0.0	0.0	0.0	1.45	0.0	0.0	0.69	0.0	0.0			
21	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28S			
22	0.0	0.0	0.0	0.13	0.0	0.08	0.40	0.0	0.0	0.0	0.0	0.11S			
23	0.0	0.0	0.0	0.11	0.0	1.55	0.0	0.0	0.0	0.0	0.20	0.08S			
24	0.0	0.0	0.80	0.0	0.0	0.46	0.0	0.0	0.10	0.0	0.0	0.0			
25	0.0	0.0	0.17	0.0	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.02S			
26	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
27	0.0	0.0	0.0	0.0	0.0	0.0	2.44	0.0	0.05E	0.03E	0.0	0.0			
28	0.31	0.0	0.06M	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29	0.46	0.06M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39M			
30	0.57	0.0	0.0	0.0	0.0	0.34	0.38	0.0	0.0	0.0	0.0	0.26S			
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18S			
TOTAL	2.39	0.73	1.50	2.27	2.83	5.28	11.67	2.15	1.47	2.14	2.71	2.54			
STA AV	1.85	2.22	4.07	3.27	3.95	4.65	4.34	3.13	2.31	2.32	2.43	2.28			

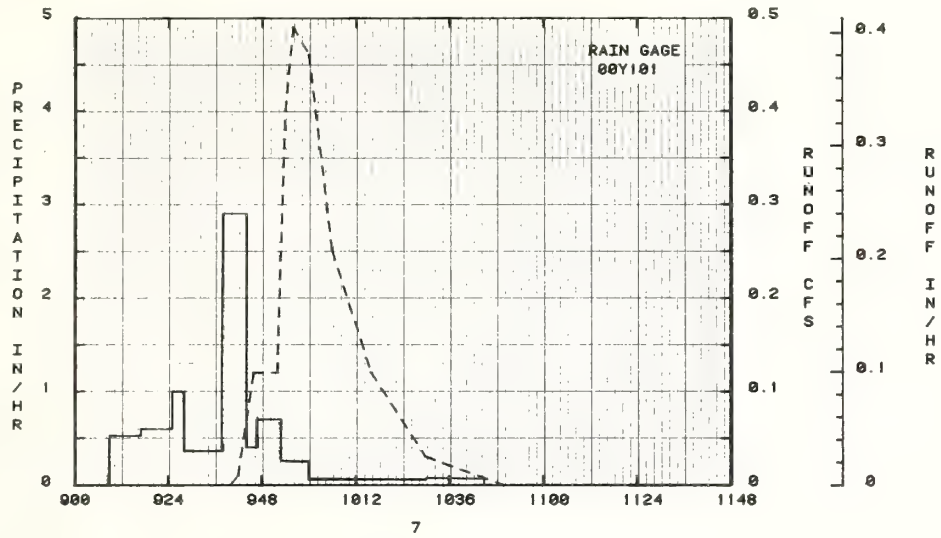
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage Y101. STA AV based on 21 yr period, part-years records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 102												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.131	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.043	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0058	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	3.402	0.0	0.0	0.0	0.0	0.0
STA AV	0.046	0.062	0.125	0.054	0.009	0.163	0.190	0.036	0.018	0.009	0.001	0.0

NOTES: To convert CFS to IN/DAY, multiply by 18.8903. STA AV based on 21 yr period, part-years records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 102										
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
RG 00Y101										
7- 7	0.10	0.0	7- 7	909	0.0	0.0	7- 7	940	0.0	0.0
				917	0.5249	0.07		942	0.010	0.0001
				925	0.6000	0.15		946	0.120	0.0035
				928	1.0001	0.20		952	0.120	0.0127
				938	0.3600	0.26		954	0.400	0.0199
WATERSHED CONDITIONS:										
50-75% Coverage 19" legumes										
and grasses; 0-25% coverage										
9" weeds; 78% density.										
				944	2.9001	0.55		956	0.490	0.0308
				947	0.3998	0.57		1000	0.460	0.0571
				953	0.7001	0.64		1006	0.250	0.0842
				1000	0.2571	0.67		1016	0.120	0.1084
				1030	0.0600	0.70		1030	0.030	0.1222
				1045	0.0800	0.72		1050	0.0	0.1261

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.78709524.



EVENT OF JULY 7, 1969
COSHOCKTON, OHIO WATERSHED 102

COSHOCTON, OHIO WATERSHED 129

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 2.71 acres

SOILS: (Revision) Berks shaly silt loam - 85 percent; Rayne silt loam - 15 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 129									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	2.27	0.82	1.47	2.29	2.69	5.09	11.81	1.88	1.54	2.19	2.79	2.76	37.60									
	Q	0.263	0.0	0.0	0.0	0.0	0.017	2.437	0.028	0.016	0.009	0.0	0.0	2.770									
STA AV	P	2.72	2.37	3.49	3.36	3.82	4.07	4.37	2.90	2.54	2.08	2.47	2.23	36.41									
	Q	0.088	0.112	0.168	0.046	0.047	0.141	0.134	0.039	0.038	0.010	0.001	0.011	0.836									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval															
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days							
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.						
1969		7-27	1.895	7- 5	0.577	7- 5	0.888	7- 5	1.411	7- 5	1.512	7- 4	1.522	7- 4	1.524	7- 2	1.714						
MAXIMUMS FOR PERIOD OF RECORD																							
		6-12	2.360	6-12	0.980	9- 1	1.010	3- 4	1.530	3- 4	2.420	3- 4	2.900	3- 3	3.510	3- 3	4.000						
		1957		1957		1950		1963		1963		1963		1963		1963							

NOTES: Watershed conditions: Cover of improved practice pasture. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.3-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.3-1 and 26.30-3. Precipitation data from rain gage 100. Precipitation and runoff records began April, 1938. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 129	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0	1.41	0.0		
2	0.0	0.03M	0.0	0.17	0.0	0.99	0.0	0.0	0.14	1.28	0.24	0.0		
3	0.0	0.04M	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.06E	0.0		
4	0.0	0.0	0.0	0.09	0.0	0.0	0.45	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.56	0.0	0.15	4.97	0.05E	0.35	0.0	0.0	0.0		
6	0.0	0.09S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.90	0.0	0.0	0.07	0.0	0.65		
8	0.05E	0.52	0.0	0.0	1.20	0.20	0.0	0.15	0.0	0.0	0.0	0.0		
9	0.14	0.04M	0.0	0.05E	0.22	0.0	0.0	0.89	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.07S	0.09	0.45	0.0	0.49	0.0	0.0	0.0	0.0	0.40		
11	0.0	0.0	0.07S	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.15M		
12	0.0	0.08S	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.05M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.07	0.05M	0.07S		
15	0.0	0.0	0.0	0.20	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.39	0.0	0.0	0.0	0.03E	0.0	0.06E	0.04E	0.29	0.0	0.05E	0.0		
18	0.30	0.0	0.0	0.55	0.31	0.02E	0.0	0.0	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.75	0.0	0.0	0.64S	0.0		
20	0.13	0.0	0.19	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0		
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.24	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.41E	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.89	0.0	0.0	0.45	0.0	0.0	0.10	0.0	0.0	0.0		
25	0.0	0.0	0.09	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.50	0.0	0.02E	0.04E	0.0	0.0		
28	0.32	0.0	0.06M	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.43	0.06M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.46	0.0	0.0	0.0	0.0	0.32	0.34	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.27	0.82	1.47	2.29	2.69	5.09	11.81	1.88	1.54	2.19	2.79	2.76		
STA AV	2.72	2.37	3.49	3.36	3.82	4.07	4.37	2.90	2.54	2.08	2.47	2.23		

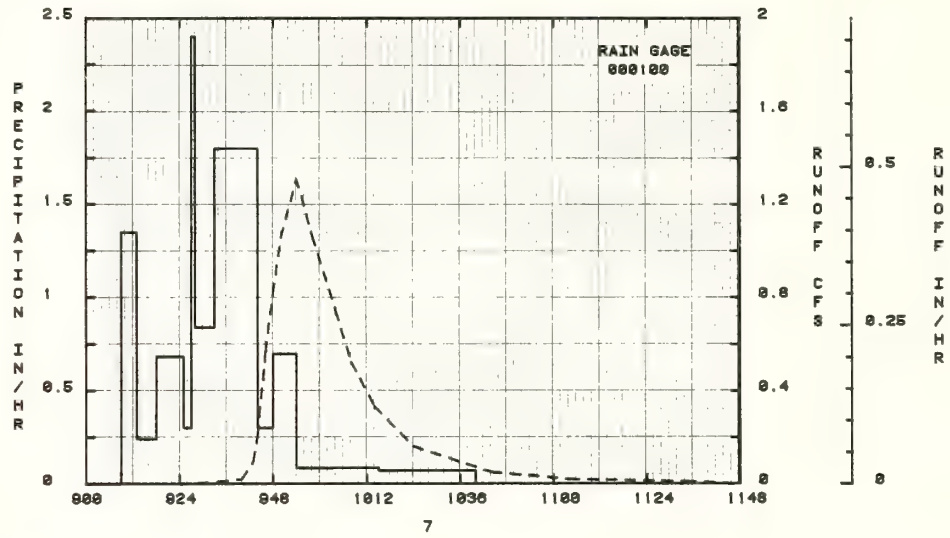
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 100. STA AV based on 32 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 129												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.001E	0.0	0.0	0.0	0.001E	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.173	0.0	0.0 T	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.001E	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.021E	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.001E	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.023	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0
18	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.002	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0 T	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.001E	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.080E	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0010	0.0	0.0	0.0	0.0	0.0001	0.0090	0.0001	0.0001	0.0	0.0	0.0
INCHES	0.263	0.0	0.0	0.0	0.0	0.017	2.437	0.028	0.016	0.009	0.0	0.0
STA AV	0.088	0.112	0.168	0.046	0.047	0.141	0.134	0.039	0.038	0.010	0.001	0.011

NOTES: To convert CFS to IN/DAY, multiply by 8.7829. STA AV based on 32 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 129												
ANTECEDENT CONDITIONS			RAINFALL									
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Runoff	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)		(inches)	
EVENT OF JULY 7, 1969												
RG 000100			RG 000100									
7- 7	0.11	0.0	7- 7	909	0.0	0.0	7- 7	924	0.0	0.0		
				913	1.3502	0.09		934	0.010	0.0002		
				918	0.2399	0.11		940	0.020	0.0008		
				925	0.6857	0.19		943	0.100	0.0020		
				927	0.3003	0.20		944	0.210	0.0029		
WATERSHED CONDITIONS: Clipped pasture of mixed grasses.				928	2.3996	0.24		946	0.570	0.0079		
				933	0.8401	0.31		948	0.820	0.0158		
				944	1.8000	0.64		950	1.060	0.0279		
				948	0.2998	0.66		954	1.310	0.0567		
				954	0.7001	0.73		958	1.060	0.0855		
				1015	0.0857	0.76		1004	0.740	0.1189		
				1040	0.0720	0.79		1008	0.520	0.1342		
								1014	0.330	0.1494		
								1024	0.160	0.1644		
								1044	0.050	0.1773		
								1104	0.020	0.1818		
								1134	0.010	0.1842		
								1204	0.0	0.1851		
								1300	0.0	0.1858		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.36595572.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 129

COSHOCTON, OHIO WATERSHED 135

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walkonding River, Muskingum River Basin.

AREA: 2.69 acres

SOILS: (Revision) Bayne silt loam - 22 percent; Dekalb channery sandy loam - 22 percent; Coshocton-Bayne silt loams - 22 percent; Keene silt loam - 19 percent; Berks shaly silt loam - 15 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W. B., Harrold, L.L., and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)								COSHOCTON, OHIO		WATERSHED 135						
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
1969	P	2.27	0.82	1.47	2.29	2.69	5.09	11.81	1.88	1.54	2.19	2.79	2.76	37.60		
	Q	0.006	0.0	0.0	0.0	0.0	0.0	0.958	0.0	0.0	0.0	0.0	0.0	0.964		
STA AV	P	2.72	2.37	3.49	3.36	3.82	4.07	4.37	2.90	2.54	2.08	2.47	2.23	36.41		
	Q	0.041	0.122	0.112	0.028	0.018	0.103	0.070	0.038	0.038	0.038	0.001	0.010	0.618		
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																
	Maximum Discharge Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	6 Hours Date	Vol.	12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.
1969	7-27	1.165	7-27	0.283	7- 5	0.350	7- 5	0.596	7- 5	0.596	7- 5	0.596	7- 5	0.596	6-29	0.624
MAXIMUMS FOR PERIOD OF RECORD																
	6-12	2.380	6-12	0.920	9- 1	0.940	3- 4	1.550	3- 4	2.190	3- 4	2.510	3- 3	3.060	3- 3	3.070
	1957		1957		1950		1963		1963		1963		1963		1963	

NOTES: Watershed conditions: Cover of unimproved pasture. For map of watershed, see Hydrologic data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.4-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.4-1 and 26.30-3. Precipitation data from rain gage 100. Precipitation and runoff records began April 1938. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 135	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0	1.41	0.0			
2	0.0	0.03M	0.0	0.17	0.0	0.99	0.0	0.0	0.14	1.28	0.24	0.0			
3	0.0	0.04M	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.06E	0.0			
4	0.0	0.0	0.0	0.09	0.0	0.0	0.45	0.0	0.0	0.0	0.04E	0.0			
5	0.0	0.0	0.0	0.56	0.0	0.15	4.97	0.05E	0.35	0.0	0.0	0.0			
6	0.0	0.09S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0			
7	0.0	0.0	0.0	0.0	0.0	0.0	0.90	0.0	0.0	0.07	0.0	0.0			0.65
8	0.05E	0.52	0.0	0.0	1.20	0.20	0.0	0.15	0.0	0.0	0.0	0.0			0.0
9	0.14	0.04M	0.0	0.05E	0.22	0.0	0.0	0.89	0.0	0.0	0.0	0.0			0.0
10	0.0	0.0	0.07S	0.09	0.45	0.0	0.49	0.0	0.0	0.0	0.0	0.40			
11	0.0	0.0	0.07S	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.15M			
12	0.0	0.08S	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.0			0.0
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.05M	0.03S			
14	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.07	0.05M	0.07S			
15	0.0	0.0	0.0	0.20	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.02S			
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
17	0.39	0.0	0.0	0.0	0.03E	0.0	0.06E	0.04E	0.29	0.0	0.05E	0.0			
18	0.30	0.0	0.0	0.55	0.31	0.02E	0.0	0.0	0.0	0.0	0.05E	0.0			
19	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.75	0.0	0.0	0.64S	0.0			
20	0.13	0.0	0.19	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0			
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S			
22	0.0	0.0	0.0	0.15	0.0	0.10	0.24	0.0	0.0	0.0	0.0	0.11S			
23	0.0	0.0	0.0	0.10	0.0	1.41E	0.0	0.0	0.0	0.20	0.08S	0.0			
24	0.0	0.0	0.89	0.0	0.0	0.45	0.0	0.0	0.10	0.0	0.0	0.0			
25	0.0	0.0	0.09	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S			
26	0.0	0.02S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	2.50	0.0	0.02E	0.04E	0.0	0.0			0.0
28	0.32	0.0	0.06M	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
29	0.43		0.06M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S			
30	0.46		0.0	0.0	0.0	0.32	0.34	0.0	0.0	0.0	0.0	0.30S			
31	0.0		0.0		0.0		0.0	0.0		0.0		0.24S			
TOTAL	2.27	0.82	1.47	2.29	2.69	5.09	11.81	1.88	1.54	2.19	2.79	2.76			
STA AV	2.72	2.37	3.49	3.36	3.82	4.07	4.37	2.90	2.54	2.08	2.47	2.23			

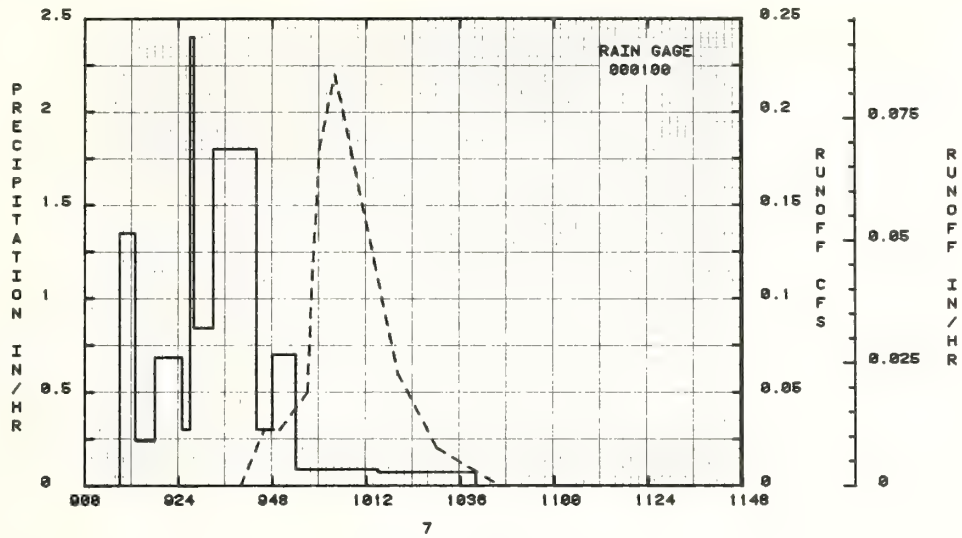
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 100. STA AV based on 32 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 135												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.067E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.001E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.038E	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0035	0.0	0.0	0.0	0.0	0.0
INCHES	0.006	0.0	0.0	0.0	0.0	0.0	0.958	0.0	0.0	0.0	0.0	0.0
STA AV	0.041	0.122	0.112	0.028	0.018	0.103	0.070	0.038	0.038	0.038	0.001	0.010

NOTES: To convert CFS to IN/DAY, multiply by 8.8483. STA AV based on 32 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 135										
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
7- 7	RG 000100	0.0	7- 7	RG 000100	0.0	0.0	7- 7	940	0.0	0.0
	0.11			909	0.0	0.09		946	0.030	0.0006
				913	1.3502	0.11		950	0.030	0.0013
				918	0.2399	0.19		957	0.050	0.0029
				925	0.6857	0.20		958	0.100	0.0033
				927	0.3003					
WATERSHED CONDITIONS:				928	2.3996	0.24		1000	0.180	0.0051
Meadow				933	0.8401	0.31		1004	0.220	0.0101
				944	1.8000	0.64		1008	0.180	0.0151
				948	0.2998	0.66		1014	0.120	0.0205
				954	0.7001	0.73		1020	0.060	0.0238
				1015	0.0857	0.76		1030	0.020	0.0262
				1040	0.0720	0.79		1046	0.0	0.0271
								1100	0.0	0.0272
								1150	0.0	0.0272

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.3668766.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 135

COSHOCTON, OHIO WATERSHED 130

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.63 acres

SOILS: (Revision) Berks shaly silt loam - 38 percent; Dekalb channery sandy loam - 31 percent; Coshocton-Rayne silt loams - 25 percent; Rayne silt loam - 6 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)													COSHOCTON, OHIO WATERSHED 130		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64	36.55	
	Q	0.056	0.0	0.0	0.0	0.0	0.0	2.438	0.0	0.0	0.0	0.0	0.0	2.493	
STA AV	P	2.67	2.26	3.34	3.25	3.77	4.00	4.41	2.79	2.55	2.08	2.44	2.18	35.73	
	Q	0.106	0.131	0.189	0.084	0.030	0.169	0.133	0.018	0.046	0.001	0.001	0.015	0.923	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge Date Rate		1 Hour Date Vol.		2 Hours Date Vol.		Maximum Volume for Selected Time Interval 6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.	
1969		7-27	1.509	7- 5	0.699	7- 5	1.012	7- 5	1.499	7- 5	1.646	7- 5	1.646	7- 5	1.646
														6-29 1.813	
MAXIMUMS FOR PERIOD OF RECORD															
		6-12	4.060	6-12	1.420	6-12	1.440	3- 4	1.550	3- 4	2.160	3- 4	2.540	3- 4	3.140
		1957		1957		1957		1963		1963		1963		1963	1963

NOTES: Watershed conditions: Cover of improved practice meadow. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.5-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.5-1 and 26.30-3. Precipitation data from rain gage 103. Precipitation and runoff records began May, 1938. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969	DAILY PRECIPITATION (inches)												COSHOCTON, OHIO WATERSHED 130	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.78	0.0		
2	0.0	0.03S	0.0	0.15	0.0	1.00	0.0	0.0	0.14	1.25	0.79	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.05	0.0		
4	0.0	0.0	0.0	0.11	0.0	0.0	2.50	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.58	0.0	0.13	2.50	0.0	0.25	0.0	0.0	0.0		
6	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.0	0.0	0.10	0.0	0.58		
8	0.05E	0.51	0.0	0.0	1.15	0.18	0.0	0.17	0.0	0.0	0.0	0.0		
9	0.08	0.03M	0.0	0.05E	0.25	0.0	0.0	0.87	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.05S	0.09	0.42	0.0	0.46	0.0	0.0	0.0	0.0	0.38		
11	0.0	0.0	0.05S	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.12M		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.10M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10M	0.07S		
15	0.0	0.0	0.0	0.19	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.42	0.0	0.0	0.0	0.05	0.0	0.07E	0.04E	0.32	0.0	0.04E	0.0		
18	0.36	0.0	0.0	0.50	0.37	0.05	0.0	0.0	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.73	0.0	0.0	0.67S	0.0		
20	0.10	0.0	0.20	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0		
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.20	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.45	0.0	0.0	0.0	0.0	0.19	0.08S		
24	0.0	0.0	0.88	0.0	0.0	0.40	0.0	0.0	0.11	0.0	0.0	0.0		
25	0.0	0.0	0.17	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.33	0.0	0.02E	0.02E	0.0	0.0		
28	0.27	0.0	0.05M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.48	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.58	0.0	0.0	0.0	0.0	0.30	0.26	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64		
STA AV	2.67	2.26	3.34	3.25	3.77	4.00	4.41	2.79	2.55	2.08	2.44	2.18		

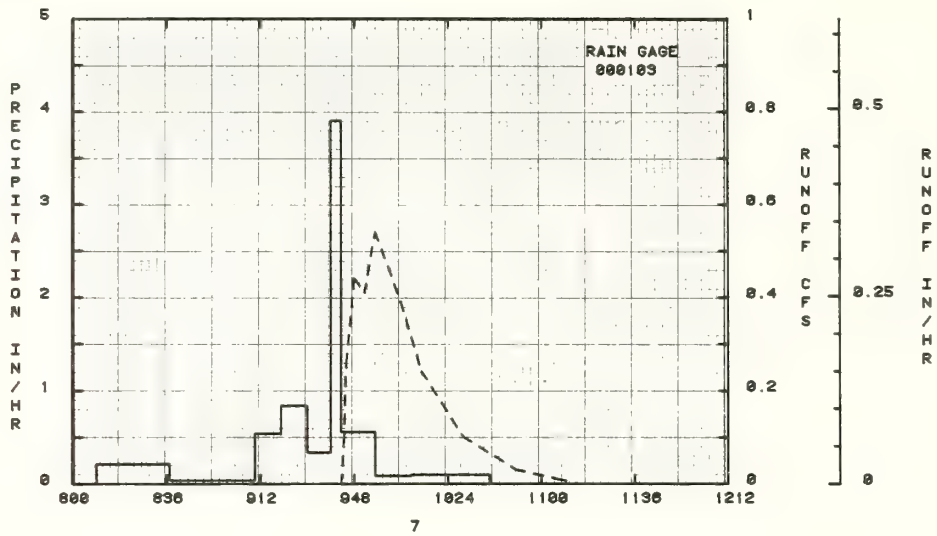
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 103. STA AV based on 32 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 130												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.113E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.011	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.042	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0001	0.0	0.0	0.0	0.0	0.0	0.0054	0.0	0.0	0.0	0.0	0.0
INCHES	0.056	0.0	0.0	0.0	0.0	0.0	2.438	0.0	0.0	0.0	0.0	0.0
STA AV	0.106	0.131	0.189	0.084	0.030	0.169	0.133	0.018	0.046	0.001	0.001	0.015

NOTES: To convert CFS to IN/DAY, multiply by 14.6023. STA AV based on 32 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 130										
ANTECEDENT CONDITIONS			RAINFALL							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
7- 7	RG 000103		7- 7	RG 000103			7- 7			
	0.0	0.0		809	0.0	0.0		943	0.0	0.0
				837	0.2143	0.10		944	0.09	0.0004
				910	0.0364	0.12		945	0.26	0.0025
				920	0.5400	0.21		946	0.44	0.0125
				930	0.8400	0.35		952	0.41	0.0297
WATERSHED CONDITIONS:				939	0.3334	0.40		956	0.54	0.0489
Mixed grasses, 50-75%, 4";				943	3.9001	0.66		1006	0.39	0.0964
0-25%, weeds, 4"; density, 75%				956	0.5538	0.78		1014	0.24	0.1219
				1010	0.0857	0.80		1030	0.10	0.1498
				1040	0.1000	0.85		1050	0.03	0.1630
								1106	0.01	0.1662
								1114	0.0	0.1665

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.60842945.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 130

COSHOCTON, OHIO WATERSHED 131

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walbonding River, Muskingum River Basin.

AREA: 2.21 acres

SOILS: (Revision) Dekalb channery sandy loam - 55 percent; Coshocton-Bayne silt loams - 27 percent; Berks shaly silt loam - 18 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.B., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 131															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64	36.55															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.342	0.0	0.0	0.0	0.0	0.0	0.342															
STA AV	P	2.67	2.26	3.34	3.25	3.77	4.00	4.41	2.79	2.55	2.08	2.44	2.18	35.73															
	Q	0.028	0.018	0.038	0.018	0.010	0.028	0.012	0.001	0.010	0.001	0.001	0.001	0.166															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		7- 5	0.193	7- 5	0.113	7- 5	0.178	7- 5	0.331	7- 5	0.334	7- 4	0.334	7- 3	0.334	6-27	0.334												
MAXIMUMS FOR PERIOD OF RECORD																													
		6-12	1.180	6-12	0.410	6-12	0.450	6-12	0.450	6-12	0.450	6-12	0.450	6-12	0.450	6-12	0.450	6-12	0.450										
		1957		1957		1957		1957		1957		1957		1957		1957		1957											

NOTES: Watershed conditions: Cover of uneven age hardwoods. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.7-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.7-1 and 26.30-3. Precipitation data from rain gage 103. Precipitation and runoff records began May, 1938. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 131													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.78	0.0															
2	0.0	0.03S	0.0	0.15	0.0	1.00	0.0	0.0	0.14	1.25	0.79	0.0															
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.05	0.0															
4	0.0	0.0	0.0	0.11	0.0	0.0	2.50	0.0	0.0	0.0	0.04E	0.0															
5	0.0	0.0	0.0	0.58	0.0	0.13	2.50	0.0	0.25	0.0	0.0	0.0															
6	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0															
7	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.0	0.0	0.10	0.0	0.0															
8	0.05E	0.51	0.0	0.0	1.15	0.18	0.0	0.17	0.0	0.0	0.0	0.0															
9	0.08	0.03M	0.0	0.05E	0.25	0.0	0.0	0.87	0.0	0.0	0.0	0.0															
10	0.0	0.0	0.05S	0.09	0.42	0.0	0.46	0.0	0.0	0.0	0.0	0.38															
11	0.0	0.0	0.05S	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.12M															
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0															
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.10M	0.03S															
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10M	0.07S															
15	0.0	0.0	0.0	0.19	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.02S															
16	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
17	0.42	0.0	0.0	0.0	0.05	0.0	0.07E	0.04E	0.32	0.0	0.04E	0.0															
18	0.36	0.0	0.0	0.50	0.37	0.05	0.0	0.0	0.0	0.0	0.05E	0.0															
19	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.73	0.0	0.0	0.67S	0.0															
20	0.10	0.0	0.20	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0															
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S															
22	0.0	0.0	0.0	0.15	0.0	0.10	0.20	0.0	0.0	0.0	0.0	0.11S															
23	0.0	0.0	0.0	0.10	0.0	1.45	0.0	0.0	0.0	0.0	0.19	0.08S															
24	0.0	0.0	0.88	0.0	0.0	0.40	0.0	0.0	0.11	0.0	0.0	0.0															
25	0.0	0.0	0.17	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.12S															
26	0.0	0.02S	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
27	0.0	0.0	0.0	0.0	0.0	0.0	2.33	0.0	0.02E	0.02E	0.0	0.0															
28	0.27	0.0	0.05M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
29	0.48	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S															
30	0.58	0.0	0.0	0.0	0.0	0.30	0.26	0.0	0.0	0.0	0.0	0.30S															
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S															
TOTAL	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64															
STA AV	2.67	2.26	3.34	3.25	3.77	4.00	4.41	2.79	2.55	2.08	2.44	2.18															

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 103. STA AV based on 32 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 131												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.031E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0010	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.342	0.0	0.0	0.0	0.0	0.0
STA AV	0.028	0.018	0.038	0.018	0.010	0.028	0.012	0.001	0.010	0.001	0.001	0.001

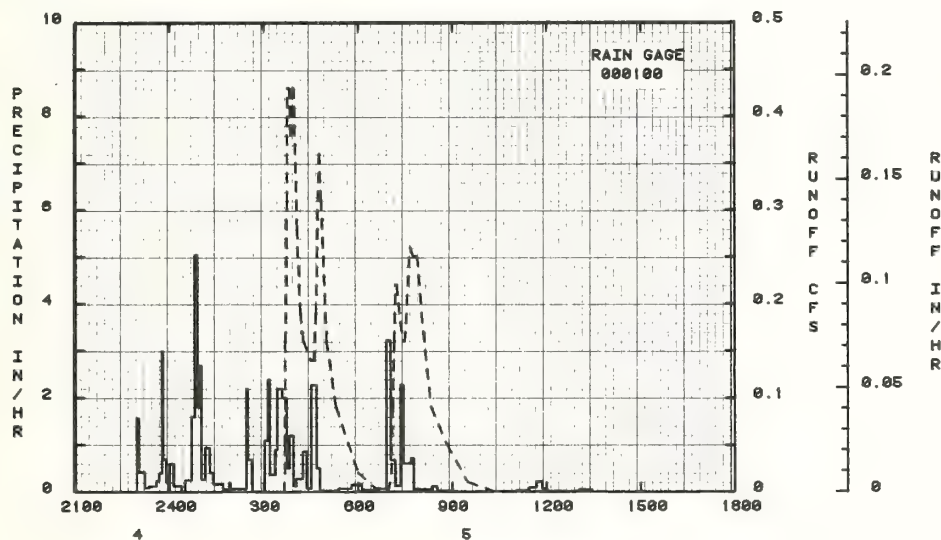
NOTES: To convert CFS to IN/HR, multiply 10.7700. STA AV based on 32 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 131										
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 4 - 5, 1969										
RG 000100			RG 000100							
7- 4	0.0		7- 4	2257	0.0	0.0	7- 5	340	0.0	0.0
7- 5		0.0		2302	1.5601	0.13		341	0.06	0.0002
				2312	0.4200	0.20		342	0.17	0.0012
				2320	0.0750	0.21		344	0.22	0.0039
				2335	0.1200	0.24		345	0.31	0.0062
WATERSHED CONDITIONS:				2340	0.2400	0.26		346	0.43	0.0088
Woods, 100%.				2346	0.4000	0.30		350	0.43	0.0216
				2347	3.0007	0.35		352	0.38	0.0273
				2354	0.6857	0.43		356	0.43	0.0394
				2400	0.2000	0.45		358	0.43	0.0462
			7- 5	7	0.6000	0.52		404	0.29	0.0625
				22	0.1200	0.55		410	0.19	0.0730
				30	0.0	0.55		416	0.17	0.0812
				42	0.2500	0.60		430	0.14	0.0975
				48	1.6000	0.76		436	0.14	0.1038
				53	5.0400	1.18		440	0.19	0.1088
				57	1.8000	1.30		446	0.36	0.1214
				101	2.7001	1.48		450	0.31	0.1314
				108	0.2571	1.51		500	0.17	0.1494
				117	0.9333	1.65		518	0.10	0.1671
				123	0.3999	1.69		600	0.02	0.1865
				142	0.1579	1.74		640	0.00	0.1910
				154	0.0500	1.75		658	0.00	0.1914
				157	0.2002	1.76		704	0.02	0.1920
				227	0.0600	1.79		706	0.10	0.1929
				230	2.2000	1.90		710	0.17	0.1968
				238	0.6750	1.99		712	0.22	0.1999
				302	0.0	1.99		714	0.22	0.2030
				308	1.1000	2.10		726	0.17	0.2205
				312	2.4001	2.26		730	0.17	0.2258
				322	0.3600	2.32		740	0.27	0.2418
				326	0.9000	2.38		746	0.25	0.2537
				335	2.2000	2.71		754	0.25	0.2688
				344	2.0000	3.01		802	0.19	0.2822
				350	0.5000	3.06		820	0.10	0.3020

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.4487511.

1969 SELECTED RUNOFF EVENT			COSHOCTON, OHIO WATERSHED 131									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	(inches)	No-Day	of Day	(cfs)	(inches)		
EVENT OF JULY 4 - 5, 1969 (CONTINUED)												
7- 5			357		1.2000	3.20	7- 5	850	0.06	0.3194		
			402		0.1199	3.21		930	0.02	0.3306		
			415		0.2769	3.27		1020	0.00	0.3341		
			422		0.8572	3.37		1100	0.0	0.3342		
			431		0.0666	3.38		1200	0.0	0.3342		
			441		2.2800	3.76						
			447		0.5000	3.81						
			522		0.0171	3.82						
			547		0.0720	3.85						
			607		0.1500	3.90						
			637		0.0400	3.92						
			655		0.0666	3.94						
			703		3.2251	4.37						
			712		0.6666	4.47						
			722		0.1200	4.49						
			727		2.2800	4.68						
			742		0.6000	4.83						
			747		0.7200	4.89						
			822		0.0515	4.92						
			832		0.1199	4.94						
			902		0.0200	4.95						
			1002		0.0	4.95						
			1102		0.0100	4.96						
			1127		0.0240	4.97						
			1141		0.0857	4.99						
			1152		0.2181	5.03						
			1202		0.0601	5.04						
			1302		0.0100	5.05						
			1327		0.0480	5.07						

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.4487511.



EVENT OF JULY 4 - 5, 1969
COSHOCTON, OHIO WATERSHED 131

COSHOCTON, OHIO WATERSHED 132

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 0.62 acres (Previously reported as 0.59 acres)

SOILS: Coshocton-Rayne silt loams - 67 percent; Berks shaly silt loam - 33 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)							COSHOCTON, OHIO WATERSHED 132									
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64	36.55		
	Q	0.545	0.050	0.165	0.063	0.131	0.0	4.031	0.0	0.0	0.0	0.0	0.0	4.985		
STA AV	P	3.14	2.36	3.23	3.32	3.31	3.48	4.67	2.44	2.56	1.88	2.56	2.32	35.27		
	Q	0.297	0.223	0.561	0.360	0.204	0.127	0.184	0.001	0.010	0.001	0.0	0.023	1.992		
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																
	Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
	Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days	
							Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	7- 5	0.729	7- 5	0.621	7- 5	0.949	7- 5	2.145	7- 5	2.583	7- 5	2.687	7- 5	2.687	6-25	2.991
MAXIMUMS FOR PERIOD OF RECORD																
	6-12	2.000	4-25	0.730	4-25	0.990	7- 5	2.145	7- 5	2.583	7- 5	2.687	3- 9	2.780	3- 4	3.520
	1957		1961		1961		1969		1969		1969		1964		1964	

NOTES: Watershed conditions: Cover of uneven age hardwoods. For revised map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 26.8-2. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.8-1 and 26.30-3. Precipitation data from rain gage 103. Precipitation and runoff records began May, 1948. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969	DAILY PRECIPITATION (inches)												COSHOCTON, OHIO WATERSHED 132	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.78	0.0		
2	0.0	0.03S	0.0	0.15	0.0	1.00	0.0	0.0	0.14	1.25	0.79	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.05	0.0		
4	0.0	0.0	0.0	0.11	0.0	0.0	2.50	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.58	0.0	0.13	2.50	0.0	0.25	0.0	0.0	0.0		
6	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.0	0.0	0.10	0.0	0.58		
8	0.05E	0.51	0.0	0.0	1.15	0.18	0.0	0.17	0.0	0.0	0.0	0.0		
9	0.08	0.03E	0.0	0.05E	0.25	0.0	0.0	0.87	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.05S	0.09	0.42	0.0	0.46	0.0	0.0	0.0	0.0	0.38		
11	0.0	0.0	0.05S	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.12E		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.10E	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10E	0.07S		
15	0.0	0.0	0.0	0.19	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.42	0.0	0.0	0.0	0.05	0.0	0.07E	0.04E	0.32	0.0	0.04E	0.0		
18	0.36	0.0	0.0	0.50	0.37	0.05	0.0	0.0	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.73	0.0	0.0	0.67S	0.0		
20	0.10	0.0	0.20	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0		
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.20	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.45	0.0	0.0	0.0	0.0	0.19	0.08S		
24	0.0	0.0	0.88	0.0	0.0	0.40	0.0	0.0	0.11	0.0	0.0	0.0		
25	0.0	0.0	0.17	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.33	0.0	0.02E	0.02E	0.0	0.0		
28	0.27	0.0	0.05E	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.48	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.58	0.0	0.0	0.0	0.0	0.30	0.26	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64		
STA AV	3.14	2.36	3.23	3.32	3.31	3.48	4.67	2.44	2.56	1.88	2.56	2.32		

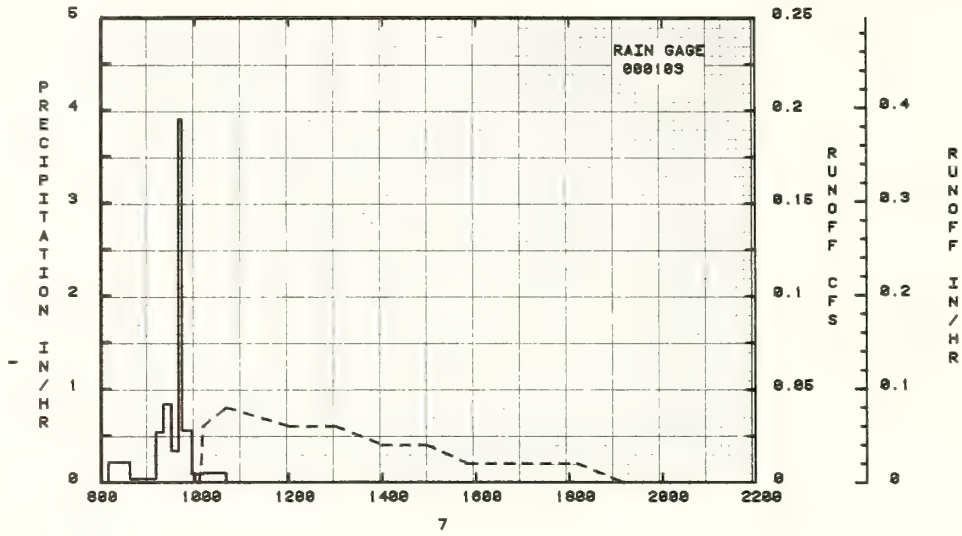
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 103. STA AV based on 22 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 132												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.002	0.0	0.0	0.069	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0 T	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0 T	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.001	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
29	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0005	0.0	0.0001	0.0001	0.0001	0.0	0.0034	0.0	0.0	0.0	0.0	0.0
INCHES	0.545	0.050	0.165	0.063	0.131	0.0	4.031	0.0	0.0	0.0	0.0	0.0
STA AV	0.297	0.223	0.561	0.360	0.204	0.127	0.184	0.001	0.010	0.001	0.0	0.023

NOTES: To convert CFS to IN/DAY, multiply by 38.3499. STA AV based on 22 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 132											
ANTECEDENT CONDITIONS			RAINFALL								
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Runoff	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)		(inches)
EVENT OF JULY 7, 1969											
RG 000103											
7- 7	0.0	0.0	7- 7	809	0.0	0.0	7- 7	1005	0.0	0.0	
				837	0.2143	0.10		1008	0.02	0.0006	
				910	0.0364	0.12		1010	0.03	0.0018	
				920	0.5400	0.21		1040	0.04	0.0294	
				930	0.8400	0.35		1200	0.03	0.1031	
WATERSHED CONDITIONS:											
Woods (cover of uneven age hardwoods).											
				939	0.3334	0.40		1300	0.03	0.1511	
				943	3.9001	0.66		1400	0.02	0.1935	
				956	0.5538	0.78		1457	0.02	0.2284	
				1010	0.0857	0.80		1550	0.02	0.2538	
				1040	0.1000	0.85		1700	0.01	0.2772	
								1810	0.01	0.2921	
								1910	0.00	0.2993	
								2010	0.00	0.3025	
								2130	0.0	0.3036	

NOTES: To convert runoff in CFS to IN/HR, multiply by 1.59957.



COSHOCTON, OHIO WATERSHED 123

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.37 acres

SOILS: (Revision) Keene silt loam - 79 percent; Rayne silt loam - 21 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)													
COSHOCTON, OHIO WATERSHED 123													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969 P	2.41	0.72	1.44	2.13	2.84	5.04	11.94	2.05	1.77	2.13	2.97	2.58	38.02
Q	0.270	0.0	0.0	0.0	0.0	0.0	3.549	0.0	0.003	0.0	0.0	0.0	3.821
STA AV P	2.77	2.40	3.45	3.47	3.84	4.25	4.51	2.89	2.57	2.21	2.57	2.35	37.27
Q	0.373	0.328	0.439	0.243	0.124	0.282	0.227	0.075	0.047	0.018	0.010	0.120	2.284

ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS													
Maximum Discharge Date	1 Hour Date	2 Hours Date	Maximum Volume for Selected Time Interval	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date					
7-27	2.113	7-5	0.755	7-5	1.253	7-5	2.054	7-5	2.131	7-5	2.305	7-5	2.305
7-5	0.755	7-5	1.253	7-5	2.054	7-5	2.131	7-5	2.305	7-5	2.305	7-2	2.600

MAXIMUMS FOR PERIOD OF RECORD													
6-12 1957	5.970	6-12 1957	1.370	6-12 1957	1.480	7-5 1969	2.054	7-5 1969	2.131	1-21 1959	2.330	1-21 1959	2.330
3-4 1964	2.660												

NOTES: Watershed conditions: Cover of meadow to corn. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.10-6. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.10-1 and 26.30-3. Precipitation data from rain gage Y103. Precipitation and runoff records began Jan. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													
COSHOCTON, OHIO WATERSHED 123													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	1.40	0.0	
2	0.0	0.02M	0.0	0.15	0.0	0.87	0.0	0.0	0.12	1.22	0.24	0.0	
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.07	0.0	
4	0.0	0.0	0.0	0.10	0.0	0.0	0.41	0.0	0.0	0.0	0.06	0.0	
5	0.0	0.0	0.0	0.55	0.0	0.13	5.09	0.0	0.45	0.0	0.0	0.0	
6	0.0	0.06S	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.11	0.0	0.63	
8	0.10	0.49	0.0	0.0	1.35	0.24	0.0	0.20	0.0	0.0	0.0	0.02	
9	0.14	0.03S	0.0	0.05	0.22	0.0	0.0	0.90	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.05S	0.09	0.47	0.0	0.53	0.0	0.0	0.0	0.0	0.44	
11	0.0	0.0	0.05S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.09M	
12	0.0	0.09S	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.05	0.09M	0.02S	
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.06	0.09M	0.04S	
15	0.0	0.0	0.0	0.17	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.03S	
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.41	0.0	0.0	0.0	0.05	0.0	0.07	0.03	0.35	0.0	0.06E	0.0	
18	0.33	0.0	0.0	0.49	0.32	0.05	0.0	0.0	0.0	0.0	0.06E	0.01M	
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.33	0.92	0.0	0.0	0.70S	0.0	
20	0.09	0.0	0.19	0.0	0.0	0.0	1.47	0.0	0.0	0.66	0.0	0.0	
21	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14S	
22	0.0	0.0	0.0	0.13	0.0	0.07	0.42	0.0	0.0	0.0	0.0	0.14S	
23	0.0	0.0	0.0	0.10	0.0	1.52	0.0	0.0	0.0	0.0	0.20	0.06S	
24	0.0	0.0	0.88	0.0	0.0	0.45	0.0	0.0	0.10	0.0	0.0	0.0	
25	0.0	0.0	0.13	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.13S	
26	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	2.45	0.0	0.05E	0.03E	0.0	0.0	
28	0.33	0.0	0.04M	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.47	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39S	
30	0.49	0.0	0.0	0.0	0.0	0.36	0.37	0.0	0.0	0.0	0.0	0.26S	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18S	
TOTAL	2.41	0.72	1.44	2.13	2.84	5.04	11.94	2.05	1.77	2.13	2.97	2.58	
STA AV	2.77	2.40	3.45	3.47	3.84	4.25	4.51	2.89	2.57	2.21	2.57	2.35	

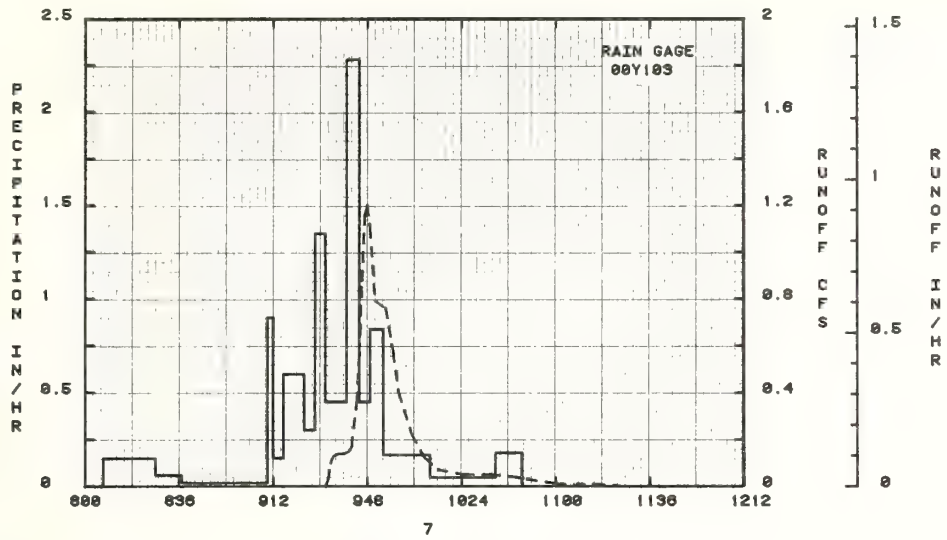
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage Y103. STA AV based on 31 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 123													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.133E	0.0	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.013	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.054	0.0	0.0	0.0	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.015E		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.0 T		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MEAN	0.0005	0.0	0.0	0.0	0.0	0.0	0.0066	0.0	0.0	0.0	0.0	0.0	
INCHES	0.270	0.0	0.0	0.0	0.0	0.0	3.549	0.0	0.003	0.0	0.0	0.0	
STA AV	0.373	0.328	0.439	0.243	0.124	0.282	0.227	0.075	0.047	0.018	0.010	0.120	

NOTES: To convert CPS to IN/DAY, multiply by 17.3736. STA AV based on 31 yr period.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 123											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	RG 00Y103		7- 7	RG 00Y103			7- 7				
	0.0	0.0		807	0.0	0.0		932	0.0	0.0	
				827	0.1500	0.05		933	0.030	0.0002	
				837	0.0601	0.06		934	0.100	0.0011	
				910	0.0182	0.07		935	0.130	0.0024	
				912	0.9000	0.10		937	0.140	0.0054	
WATERSHED CONDITIONS: 50-75%, 36" corn; 0-25%, 9" weeds; 65% density.				916	0.1501	0.11		939	0.140	0.0089	
				924	0.6000	0.19		941	0.150	0.0121	
				928	0.2998	0.21		942	0.170	0.0144	
				932	1.3499	0.30		944	0.360	0.0205	
				940	0.4501	0.36		945	0.570	0.0271	
				945	2.2798	0.55		946	0.880	0.0353	
				949	0.4502	0.58		947	1.160	0.0468	
				954	0.8399	0.65		948	1.200	0.0601	
				1012	0.1667	0.70		949	1.100	0.0764	
				1037	0.0480	0.72		951	0.790	0.0978	
				1047	0.1800	0.75		955	0.760	0.1352	
								958	0.570	0.1596	
								1000	0.400	0.1719	
								1005	0.220	0.1904	
								1010	0.120	0.2005	
								1015	0.070	0.2065	
								1025	0.050	0.2140	
								1035	0.050	0.2200	
								1044	0.040	0.2247	
								1049	0.030	0.2269	
								1100	0.010	0.2297	
								1115	0.010	0.2313	
								1125	0.0	0.2318	
								1200	0.0	0.2322	
								1230	0.0	0.2322	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.72389781.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 123

COSHOCTON, OHIO WATERSHED 115

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.61 acres

SOILS: (Revision) Rayne silt loam - 49 percent; Coshocton silt loam - 38 percent; Keene silt loam - 13 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.B., Barrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 115															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.41	0.72	1.44	2.13	2.84	5.04	11.94	2.05	1.77	2.13	2.97	2.58	38.02															
	Q	0.103	0.0	0.0	0.0	0.024	0.185	8.813	0.448	0.414	0.039	0.063	0.033	10.120															
STA AV	P	2.81	2.34	3.45	3.47	3.84	4.25	4.51	2.89	2.57	2.21	2.57	2.35	37.25															
	Q	0.210	0.234	0.222	0.132	0.152	0.371	0.557	0.164	0.126	0.029	0.020	0.057	2.275															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge Date Rate		1 Hour Date Vol.		2 Hours Date Vol.		Maximum Volume for Selected Time Interval												2 Days Date Vol.		8 Days Date Vol.							
								6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.																	
1969		7-27	5.433	7-27	1.397	7- 5	1.751	7- 4	3.032	7- 4	4.031	7- 4	4.401	7- 4	4.410	7- 3	5.494												
MAXIMUMS FOR PERIOD OF RECORD																													
		7-27	5.433	7-27	1.397	7- 5	1.751	7- 4	3.032	7- 4	4.031	7- 4	4.401	7- 4	4.410	7- 3	5.494												
		1969		1969		1969		1969		1969		1969		1969		1969													

NOTES: Watershed conditions: Cover of meadow to corn. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.11-6. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.11-1 and 26.30-3. Precipitation data from rain gage Y103. Precipitation and runoff records began April 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 115	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	1.40	0.0		
2	0.0	0.02M	0.0	0.15	0.0	0.87	0.0	0.0	0.12	1.22	0.24	0.0		
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.07	0.0		
4	0.0	0.0	0.0	0.10	0.0	0.0	0.41	0.0	0.0	0.0	0.06	0.0		
5	0.0	0.0	0.0	0.55	0.0	0.13	5.09	0.0	0.45	0.0	0.0	0.0		
6	0.0	0.06S	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.11	0.0	0.63		
8	0.10	0.49	0.0	0.0	1.35	0.24	0.0	0.20	0.0	0.0	0.0	0.02		
9	0.14	0.03S	0.0	0.05	0.22	0.0	0.0	0.90	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.05S	0.09	0.47	0.0	0.53	0.0	0.0	0.0	0.0	0.44		
11	0.0	0.0	0.05S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.09M		
12	0.0	0.09S	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.05	0.09M	0.02S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.06	0.09M	0.04S		
15	0.0	0.0	0.0	0.17	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.03S		
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.41	0.0	0.0	0.0	0.05	0.0	0.07	0.03	0.35	0.0	0.06E	0.0		
18	0.33	0.0	0.0	0.49	0.32	0.05	0.0	0.0	0.0	0.0	0.06E	0.01M		
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.33	0.92	0.0	0.0	0.70S	0.0		
20	0.09	0.0	0.19	0.0	0.0	0.0	1.47	0.0	0.0	0.66	0.0	0.0		
21	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14S		
22	0.0	0.0	0.0	0.13	0.0	0.07	0.42	0.0	0.0	0.0	0.0	0.14S		
23	0.0	0.0	0.0	0.10	0.0	1.52	0.0	0.0	0.0	0.0	0.20	0.06S		
24	0.0	0.0	0.88	0.0	0.0	0.45	0.0	0.0	0.10	0.0	0.0	0.0		
25	0.0	0.0	0.13	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.13S		
26	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.45	0.0	0.05E	0.03E	0.0	0.0		
28	0.33	0.0	0.04M	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.47	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39S		
30	0.49	0.0	0.0	0.0	0.0	0.36	0.37	0.0	0.0	0.0	0.0	0.26S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18S		
TOTAL	2.41	0.72	1.44	2.13	2.84	5.04	11.94	2.05	1.77	2.13	2.97	2.58		
STA AV	2.81	2.34	3.45	3.47	3.84	4.25	4.51	2.89	2.57	2.21	2.57	2.35		

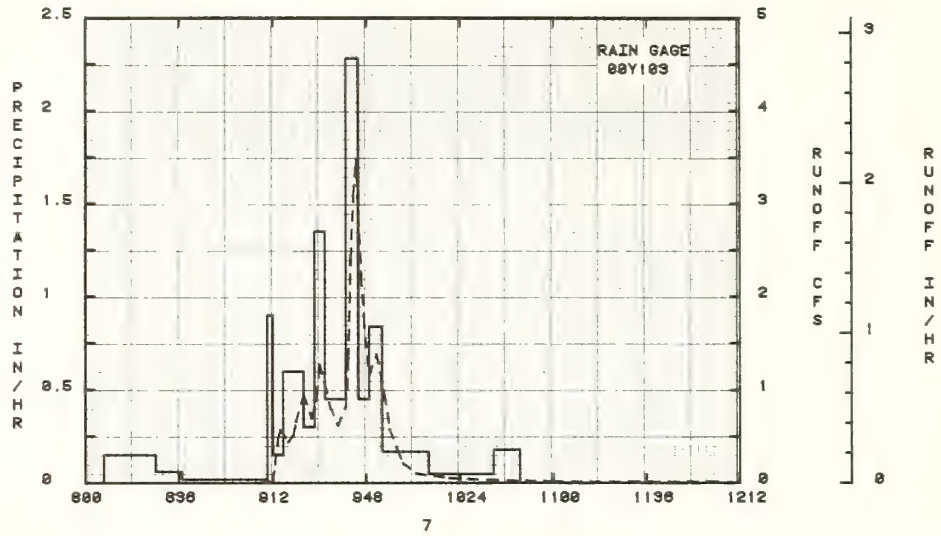
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage Y103. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 115												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.001	0.001	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.296E	0.0	0.006	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.022E	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.040	0.0	0.0	0.0	0.0	0.001
8	0.0	0.0	0.0	0.0	0.001	0.0	0.003	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.009	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.001	0.0	0.028	0.0	0.0	0.0	0.0	0.001
11	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0 T
12	0.0	0.0	0.0	0.0	0.0	0.003E	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.021	0.0	0.0	0.002	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.041	0.0	0.0	0.001	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.004E	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.153E	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.006	0.0	0.0	0.0	0.0	0.002E	0.015	0.0	0.0	0.0	0.0	0.0
31	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0002	0.0	0.0	0.0	0.0001	0.0004	0.0192	0.0010	0.0009	0.0001	0.0001	0.0001
INCHES	0.103	0.0	0.0	0.0	0.024	0.185	8.813	0.448	0.414	0.039	0.063	0.033
STA AV	0.210	0.238	0.222	0.132	0.152	0.371	0.557	0.164	0.126	0.029	0.020	0.057

NOTES: To convert CFS to IN/DAY, multiply by 14.7837. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 115												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JULY 7, 1969												
RG 001103			RG 001103									
7- 7	0.0	0.0	7- 7	807	0.0	0.0	7- 7	907	0.0	0.0		
				827	0.1500	0.05		912	0.030	0.0008		
				837	0.0601	0.06		913	0.210	0.0020		
				910	0.0182	0.07		914	0.480	0.0053		
				912	0.9000	0.10		915	0.570	0.0116		
				916	0.1501	0.11		918	0.440	0.0261		
				924	0.6000	0.19		920	0.520	0.0365		
				928	0.2998	0.21		921	0.660	0.0422		
				932	1.3499	0.30		924	0.940	0.0672		
				940	0.4501	0.36		927	0.690	0.0926		
				945	2.2798	0.55		929	0.940	0.1082		
				949	0.4502	0.58		930	1.270	0.1215		
				954	0.8399	0.65		932	1.060	0.1439		
				1012	0.1667	0.70		934	0.820	0.1643		
				1037	0.0480	0.72		937	0.610	0.1850		
				1047	0.1800	0.75		940	0.820	0.2074		
								941	1.340	0.2178		
								942	2.420	0.2404		
								943	3.100	0.2670		
								944	3.480	0.2987		
								945	2.860	0.3368		
								946	2.210	0.3612		
								947	1.750	0.3803		
								949	1.160	0.4118		
								952	1.380	0.4485		
								955	0.940	0.4847		
								957	0.570	0.5010		
								1000	0.350	0.5153		
								1002	0.210	0.5206		
								1007	0.100	0.5284		
								1020	0.050	0.5386		
								1035	0.030	0.5450		
								1100	0.010	0.5504		
								1200	0.010	0.5566		
								2400	0.0	0.5936		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.61598758.



COSHOCTON, OHIO WATERSHED 127

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.65 acres

SOILS: (Revision) Coshocton-Bayne silt loams - 63 percent; Keene silt loam - 31 percent; Clarksburg silt loam - 6 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.B., Edwards, W.B., Barrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)										COSHOCTON, OHIO WATERSHED 127									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	2.41	0.72	1.44	2.13	2.84	5.04	11.94	2.05	1.77	2.13	2.97	2.58	38.02					
	Q	0.520	0.026	0.0	0.0	0.039	0.057	6.118	0.110	0.027	0.013	0.010	0.0	6.920					
STA AV	P	3.16	2.51	3.39	3.60	3.44	3.63	4.79	2.73	2.58	1.94	2.67	2.47	36.90					
	Q	0.769	0.670	0.618	0.327	0.114	0.247	0.393	0.068	0.074	0.019	0.037	0.270	3.606					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-27	3.426	7-27	0.865	7- 5	1.422	7- 5	2.485	7- 5	3.051	7- 5	3.388	7- 4	3.591	7- 3	4.327		
MAXIMUMS FOR PERIOD OF RECORD																			
		7-27	3.426	9- 1	1.330	9- 1	1.480	7- 5	2.485	7- 5	3.051	7- 5	3.388	7- 4	3.591	7- 3	4.327		
		1969		1950		1950		1969		1969		1969		1969		1969			

NOTES: Watershed conditions: Cover of meadow to corn. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.12-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.12-1 and 26.30-3. Precipitation data from rain gage Y103. Precipitation and runoff records began May 1949. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 127	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	1.40	0.0		
2	0.0	0.02H	0.0	0.15	0.0	0.87	0.0	0.0	0.12	1.22	0.24	0.0		
3	0.0	0.03H	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.07	0.0		
4	0.0	0.0	0.0	0.10	0.0	0.0	0.41	0.0	0.0	0.0	0.06	0.0		
5	0.0	0.0	0.0	0.55	0.0	0.13	5.09	0.0	0.45	0.0	0.0	0.0		
6	0.0	0.06S	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.11	0.0	0.63		
8	0.10	0.49	0.0	0.0	1.35	0.24	0.0	0.20	0.0	0.0	0.0	0.02		
9	0.14	0.03S	0.0	0.05	0.22	0.0	0.0	0.90	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.05S	0.09	0.47	0.0	0.53	0.0	0.0	0.0	0.0	0.44		
11	0.0	0.0	0.05S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.09H		
12	0.0	0.09S	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.05	0.09H	0.02S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.06	0.09H	0.04S		
15	0.0	0.0	0.0	0.17	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.03S		
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.41	0.0	0.0	0.0	0.05	0.0	0.07	0.03	0.35	0.0	0.06E	0.0		
18	0.33	0.0	0.0	0.49	0.32	0.05	0.0	0.0	0.0	0.0	0.06E	0.01H		
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.33	0.92	0.0	0.0	0.70S	0.0		
20	0.09	0.0	0.19	0.0	0.0	0.0	1.47	0.0	0.0	0.66	0.0	0.0		
21	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14S		
22	0.0	0.0	0.0	0.13	0.0	0.07	0.42	0.0	0.0	0.0	0.0	0.14S		
23	0.0	0.0	0.0	0.10	0.0	1.52	0.0	0.0	0.0	0.0	0.20	0.06S		
24	0.0	0.0	0.68	0.0	0.0	0.45	0.0	0.0	0.10	0.0	0.0	0.0		
25	0.0	0.0	0.13	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.13S		
26	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.45	0.0	0.05E	0.03E	0.0	0.0		
28	0.33	0.0	0.04H	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.47	0.0	0.05H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39S		
30	0.49	0.0	0.0	0.0	0.0	0.36	0.37	0.0	0.0	0.0	0.0	0.26S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18S		
TOTAL	2.41	0.72	1.44	2.13	2.84	5.04	11.94	2.05	1.77	2.13	2.97	2.58		
STA AV	3.16	2.51	3.39	3.60	3.44	3.63	4.79	2.73	2.58	1.94	2.67	2.47		

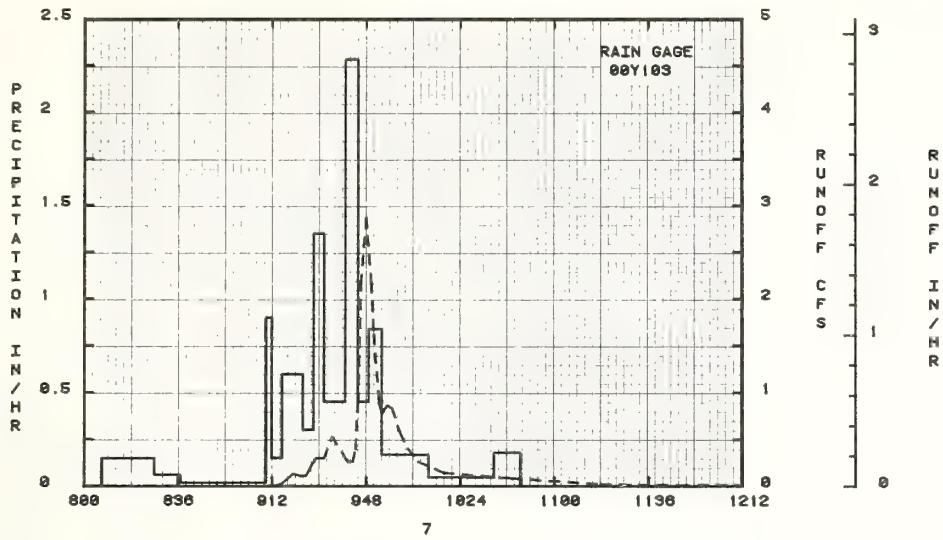
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage Y103. STA AV based on 21 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 127												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.235E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.014	0.0	0.002	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.032E	0.0	0.0	0.0	0.0	0.0
8	0.0	0.001	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.001	0.0	0.014	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.001	0.0	0.001	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.009E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.014	0.0	0.0	0.001	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.002E	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.099E	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.018	0.0	0.0	0.0	0.0	0.0	0.005E	0.0	0.0	0.0	0.0	0.0
31	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0012	0.0001	0.0	0.0	0.0001	0.0001	0.0137	0.0002	0.0001	0.0	0.0	0.0
INCHES	0.520	0.026	0.0	0.0	0.039	0.057	6.118	0.110	0.027	0.013	0.010	0.0
STA AV	0.769	0.670	0.618	0.327	0.114	0.247	0.393	0.068	0.074	0.019	0.037	0.270

NOTES: To convert CFS to IN/DAY, multiply by 14.4253. STA AV based on 21 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT			COSHOCTON, OHIO WATERSHED 127									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JULY 7, 1969												
7- 7	RG 00Y103		7- 7	RG 00Y103			7- 7					
	0.0	0.023		807	0.0	0.0		911	0.0	0.0		
				827	0.1500	0.05		914	0.010	0.0001		
				837	0.0601	0.06		916	0.030	0.0005		
				910	0.0182	0.07		918	0.080	0.0016		
				912	0.9000	0.10		920	0.130	0.0038		
WATERSHED CONDITIONS: 25-50%, 35" corn; 0-25%, 13" weeds; 50% density.				916	0.1501	0.11		923	0.110	0.0076		
				924	0.6000	0.19		925	0.110	0.0097		
				928	0.2998	0.21		926	0.160	0.0110		
				932	1.3499	0.30		928	0.260	0.0154		
				940	0.4501	0.36		929	0.300	0.0180		
				945	2.2798	0.55		932	0.300	0.0270		
				949	0.4502	0.58		935	0.530	0.0396		
				954	0.8399	0.65		941	0.260	0.0628		
				1012	0.1667	0.70		943	0.260	0.0684		
				1037	0.0480	0.72		944	0.400	0.0715		
			1047	0.1800	0.75		945	0.890	0.0791			
							946	2.160	0.0934			
							948	2.860	0.1405			
							950	2.160	0.1935			
							951	1.610	0.2112			
							953	0.890	0.2376			
							954	0.780	0.2454			
							956	0.860	0.2608			
							958	0.830	0.2787			
							1001	0.570	0.3002			
							1004	0.400	0.3151			
							1008	0.260	0.3284			
							1018	0.140	0.3486			
							1044	0.080	0.3775			
							1118	0.020	0.3945			
							1148	0.010	0.3990			
							1500	0.010	0.4125			
							2400	0.0	0.4423			

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.60105455.



COSHOCTON, OHIO WATERSHED 109

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.69 acres

SOILS: (Revision) Rayne silt loam - 65 percent; Berks shaly silt loam - 35 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)								COSHOCTON, OHIO WATERSHED 109									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.22	0.70	1.52	2.07	2.83	5.23	11.56	1.82	1.71	2.28	2.70	2.67	37.31			
	Q	0.0	0.0	0.0	0.0	0.0	0.078	3.041	0.025	0.022	0.0	0.0	0.0	3.166			
STA AV	P	2.66	2.28	3.39	3.42	3.85	4.23	4.56	2.84	2.59	2.16	2.47	2.23	36.68			
	Q	0.066	0.150	0.131	0.046	0.103	0.265	0.304	0.151	0.047	0.010	0.001	0.018	1.292			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-27	2.364	7-27	0.622	7- 5	0.883	7- 5	1.416	7- 5	1.613	7- 5	1.705	7- 5	1.705	7- 2	1.887
MAXIMUMS FOR PERIOD OF RECORD																	
		5-17	4.340	6-29	0.820	6-28	1.090	7- 5	1.416	3- 4	1.920	3- 4	2.170	3- 3	2.550	3- 1	2.660
		1941		1941		1940		1969		1963		1963		1963		1963	

NOTES: Watershed conditions: Cover of meadow to corn. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.13-4. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.13-1 and 26.30-3. Precipitation data from rain gage Y102. Precipitation and runoff records began Nov. 1938. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 109	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	1.30	0.0		
2	0.0	0.03M	0.0	0.15	0.0	0.92	0.0	0.0	0.15	1.22	0.23	0.0		
3	0.0	0.04M	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.05	0.0		
4	0.0	0.0	0.0	0.10	0.0	0.0	0.39	0.0	0.0	0.0	0.05	0.0		
5	0.0	0.0	0.0	0.57	0.0	0.12	4.77	0.0	0.43	0.0	0.0	0.0		
6	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.78	0.0	0.0	0.11	0.0	0.55		
8	0.05E	0.45	0.0	0.0	1.31	0.20	0.0	0.19	0.0	0.0	0.0	0.05E		
9	0.10	0.05M	0.0	0.05	0.20	0.0	0.0	0.90	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.05S	0.07	0.45	0.0	0.46	0.0	0.0	0.0	0.0	0.40		
11	0.0	0.0	0.05S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.10M		
12	0.0	0.08S	0.0	0.0	0.0	0.58	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.05	0.05M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.07	0.05M	0.07S		
15	0.0	0.0	0.0	0.17	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.39	0.0	0.0	0.0	0.05E	0.0	0.07	0.03	0.32	0.0	0.03E	0.0		
18	0.31	0.0	0.0	0.48	0.34	0.05E	0.0	0.0	0.0	0.0	0.04E	0.01E		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.70	0.0	0.0	0.70S	0.0		
20	0.10	0.0	0.20	0.0	0.0	0.0	1.50	0.0	0.0	0.80	0.0	0.0		
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.12	0.0	0.07	0.18	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.11	0.0	1.51	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.87	0.0	0.0	0.45	0.0	0.0	0.09	0.0	0.0	0.0		
25	0.0	0.0	0.18	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.67	0.0	0.05	0.03E	0.0	0.0		
28	0.30	0.0	0.06M	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.45		0.06M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32M		
30	0.50		0.0	0.0	0.0	0.32	0.28	0.0	0.0	0.0	0.0	0.30M		
31	0.0		0.0		0.0		0.0					0.24M		
TOTAL	2.22	0.70	1.52	2.07	2.83	5.23	11.56	1.82	1.71	2.28	2.70	2.67		
STA AV	2.66	2.28	3.39	3.42	3.85	4.23	4.56	2.84	2.59	2.16	2.47	2.23		

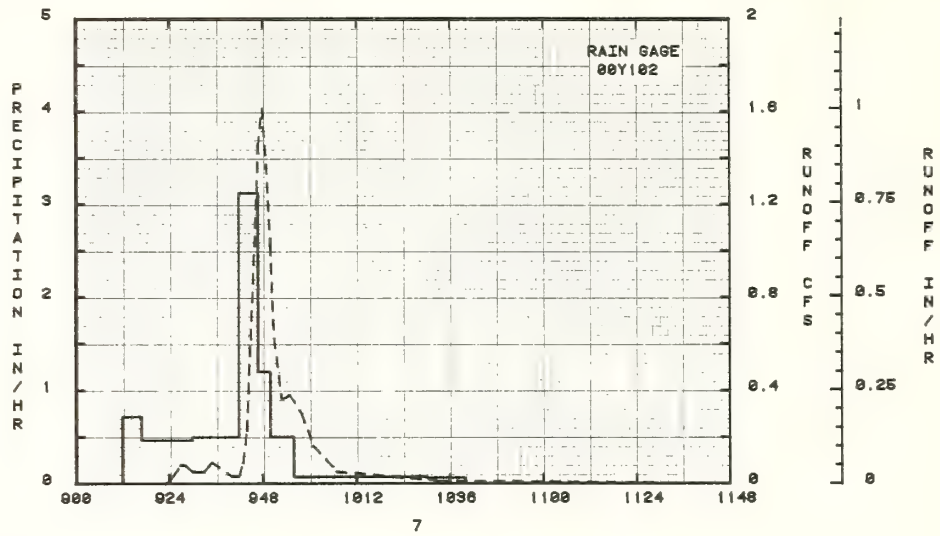
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage Y102. STA AV based on 32 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 109												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.121E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.010E	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001E	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.073	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0002	0.0070	0.0001	0.0001	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.078	3.041	0.025	0.022	0.0	0.0	0.0
STA AV	0.066	0.150	0.131	0.046	0.103	0.265	0.304	0.151	0.047	0.010	0.001	0.018

NOTES: To convert CFS to IN/DAY, multiply by 14.0839. STA AV based on 32 yr period, part-year records included.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 109		
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 00Y102			RG 00Y102								
7- 7	0.10	0.0	7- 7	912	0.0	0.0	7- 7	923	0.0	0.0	
				917	0.7200	0.06		924	0.010	0.0	
				930	0.4615	0.16		925	0.030	0.0002	
				942	0.5000	0.26		927	0.080	0.0014	
				947	3.1199	0.52		928	0.080	0.0021	
WATERSHED CONDITIONS:				950	1.1999	0.58		930	0.050	0.0035	
50-75%, 37" corn; 0-25%, 14"				956	0.5000	0.63		933	0.050	0.0049	
weeds; 75%, density.				1030	0.0706	0.67		935	0.090	0.0064	
			1040	0.0600	0.68		940	0.030	0.0095		
							942	0.030	0.0102		
							943	0.090	0.0108		
							944	0.230	0.0123		
							945	0.620	0.0172		
							946	1.020	0.0247		
							947	1.450	0.0360		
							948	1.610	0.0500		
							949	1.370	0.0671		
							950	1.020	0.0781		
							951	0.620	0.0856		
							953	0.360	0.0958		
							955	0.380	0.1027		
							958	0.300	0.1128		
							1001	0.160	0.1195		
							1007	0.050	0.1253		
							1033	0.010	0.1331		
							1133	0.0	0.1378		
							1200	0.0	0.1381		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.58682840.



AREA: 0.65 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)								COSHOCTON, OHIO WATERSHED 103							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67	36.33	
	Q	0.373	0.002	0.0	0.0	0.0	0.0	3.372	0.0	0.0	0.0	0.0	0.0	3.747	
STA AV	P	2.63	2.16	3.26	3.26	3.65	4.03	4.37	2.76	2.56	2.07	2.41	2.19	35.35	
	Q	0.320	0.350	0.596	0.272	0.148	0.355	0.352	0.122	0.131	0.028	0.028	0.089	2.791	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval							
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days	
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-27	2.471	7- 5	0.596	7- 5	0.816	7- 5	1.615	7- 5	1.757	7- 5	1.877	7- 5	1.881
								7- 5	1.615	7- 5	1.757	7- 5	1.877	7- 5	1.881
MAXIMUMS FOR PERIOD OF RECORD															
		7-23	4.720	9- 1	1.950	9- 1	2.600	9- 1	2.620	3- 4	2.820	3- 4	3.070	3- 3	4.150
		1940		1950		1950		1950		1963		1963		1963	

NOTES: Watershed conditions: Cover of second year meadow, improved pasture. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1949-59, USDA Misc. Pub. 945, P. 26.14-5. For ecology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.14-1 and 26.30-3. Precipitation data from rain gauge 107. Precipitation and runoff records began April 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969	DAILY PRECIPITATION (inches)					COSHOCTON, OHIO WATERSHED 103							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	1.37	0.0	
2	0.0	0.02S	0.0	0.13	0.0	0.87	0.0	0.0	0.12E	1.22	0.29	0.0	
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.04E	0.0	
4	0.0	0.0	0.0	0.07	0.0	0.0	0.36	0.0	0.0	0.0	0.04E	0.0	
5	0.0	0.0	0.0	0.52	0.0	0.14	4.70	0.0	0.22	0.0	0.0	0.0	
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.10	0.0	0.60	
8	0.05E	0.44	0.0	0.0	1.50	0.12	0.0	0.15	0.0	0.0	0.0	0.02	
9	0.12	0.03E	0.0	0.05E	0.21	0.0	0.0	0.88	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.04S	0.10	0.40	0.0	0.40	0.0	0.0	0.0	0.0	0.39	
11	0.0	0.0	0.04S	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.05	0.10E	0.03S	
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10E	0.07S	
15	0.0	0.0	0.0	0.19	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.02S	
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.35	0.0	0.0	0.0	0.05E	0.0	0.06E	0.04E	0.32	0.0	0.04E	0.0	
18	0.30	0.0	0.0	0.54	0.35	0.05E	0.0	0.0	0.0	0.0	0.04E	0.0	
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.50	0.58	0.0	0.0	0.66S	0.0	
20	0.08	0.0	0.15	0.0	0.0	0.0	1.48	0.0	0.0	0.70	0.0	0.0	
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S	
22	0.0	0.0	0.0	0.15	0.0	0.10	0.06	0.0	0.0	0.0	0.0	0.11S	
23	0.0	0.0	0.0	0.09	0.0	1.67	0.0	0.0	0.0	0.0	0.20	0.08S	
24	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.13	0.0	0.0	0.0	
25	0.0	0.0	0.10	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S	
26	0.0	0.02S	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	2.59	0.0	0.02E	0.03E	0.0	0.0	
28	0.30	0.0	0.03S	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.43	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S	
30	0.47	0.0	0.0	0.0	0.0	0.45	0.25	0.0	0.0	0.0	0.0	0.30S	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	
TOTAL	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67	
STA AV	2.63	2.16	3.26	3.26	3.65	4.03	4.37	2.76	2.56	2.07	2.41	2.19	

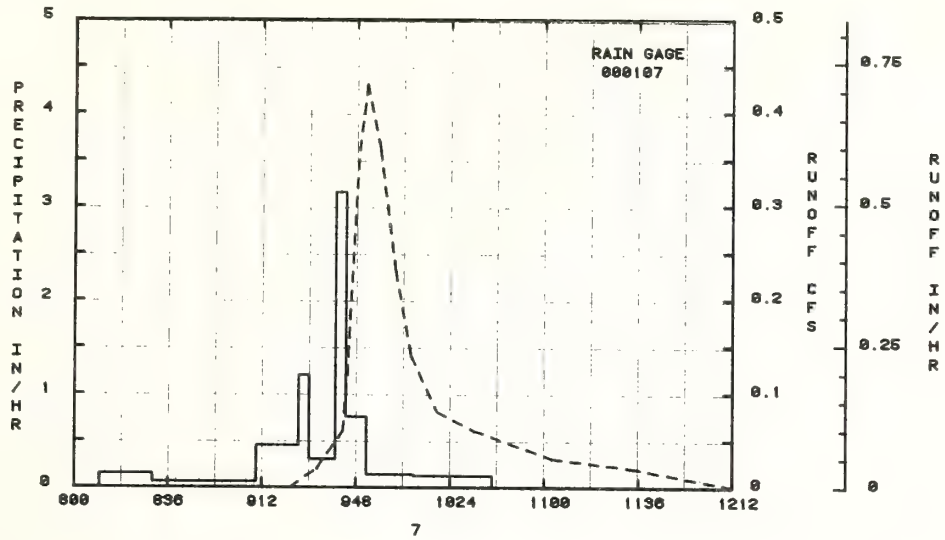
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 107. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 103												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.051	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.009	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.026	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.007		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.001E		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0003	0.0	0.0	0.0	0.0	0.0	0.0030	0.0	0.0	0.0	0.0	0.0
INCHES	0.373	0.002	0.0	0.0	0.0	0.0	3.372	0.0	0.0	0.0	0.0	0.0
STA AV	0.320	0.350	0.596	0.272	0.148	0.355	0.352	0.122	0.131	0.028	0.028	0.089

NOTES: To convert CFS to IN/DAY, multiply by 36.6181. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT						COSHOCTON, OHIO WATERSHED 103					
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 000107			RG 000107								
7- 7	0.0	0.0	7- 7	810	0.0	0.0	7- 7	923	0.0	0.0	
				830	0.1500	0.05		933	0.020	0.0021	
				910	0.0600	0.09		943	0.060	0.0116	
				926	0.4500	0.21		945	0.140	0.0169	
				930	1.2000	0.29		947	0.260	0.0265	
WATERSHED CONDITIONS:				940	0.3000	0.34		949	0.360	0.0431	
50-75%, 4" mixed grass; 0-25%,				944	3.1499	0.55		952	0.430	0.0712	
4" weeds; 75% density.				952	0.7500	0.65		957	0.360	0.1227	
				1010	0.1333	0.69		1003	0.230	0.1667	
				1040	0.1200	0.75		1009	0.140	0.1956	
								1019	0.080	0.2243	
								1033	0.060	0.2493	
								1103	0.030	0.2840	
								1133	0.020	0.3035	
								1233	0.0	0.3203	
								1333	0.0	0.3249	
								1513	0.0	0.3262	

NOTES: To convert runoff in CFS to IN/HR, multiply by 1.52575385.



EVENT OF JULY 7, 1969
COSHOCOTON, OHIO WATERSHED 103

COSHOCTON, OHIO WATERSHED 110

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.27 acres

SOILS: (Revision) Bayne silt loam - 54 percent; Keene silt loam - 46 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.E., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 110															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67	36.33															
	Q	0.0	0.0	0.0	0.0	0.0	0.006	1.647	0.0	0.0	0.0	0.0	0.0	1.653															
STA AV	P	2.63	2.16	3.26	3.26	3.65	4.03	4.37	2.76	2.56	2.07	2.41	2.19	35.35															
	Q	0.212	0.224	0.364	0.140	0.114	0.327	0.296	0.103	0.131	0.028	0.018	0.086	2.044															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		7- 5	0.730	7- 5	0.420	7- 5	0.594	7- 5	1.160	7- 5	1.188	7- 5	1.213	7- 5	1.213	6-29	1.296												
MAXIMUMS FOR PERIOD OF RECORD																													
		7-28	4.440	9- 1	2.240	9- 1	3.160	9- 1	3.190	9- 1	3.190	9- 1	3.200	3- 3	4.120	3- 1	5.050												
		1950		1950		1950		1950		1950		1950		1950		1963													

NOTES: Watershed conditions: Cover of second year meadow, prevailing practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.14-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.15-1 and 26.30-3. Precipitation data from rain gage 107. Precipitation and runoff records began Apr. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969		DAILY PRECIPITATION (inches)					COSHOCTON, OHIO WATERSHED 110							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	1.37	0.0		
2	0.0	0.02S	0.0	0.13	0.0	0.87	0.0	0.0	0.12E	1.22	0.29	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.04E	0.0		
4	0.0	0.0	0.0	0.07	0.0	0.0	0.36	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.52	0.0	0.14	4.70	0.0	0.22	0.0	0.0	0.0		
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.10	0.0	0.60		
8	0.05E	0.44	0.0	0.0	1.50	0.12	0.0	0.15	0.0	0.0	0.0	0.02		
9	0.12	0.03E	0.0	0.05E	0.21	0.0	0.0	0.88	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.10	0.40	0.0	0.40	0.0	0.0	0.0	0.0	0.39		
11	0.0	0.0	0.04S	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.10E		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.05	0.10E	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10E	0.07S		
15	0.0	0.0	0.0	0.19	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.35	0.0	0.0	0.0	0.05E	0.0	0.06E	0.04E	0.32	0.0	0.04E	0.0		
18	0.30	0.0	0.0	0.54	0.35	0.05E	0.0	0.0	0.0	0.0	0.04E	0.0		
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.50	0.58	0.0	0.0	0.66S	0.0		
20	0.08	0.0	0.15	0.0	0.0	0.0	1.48	0.0	0.0	0.70	0.0	0.0		
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.06	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.09	0.0	1.67	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.80	0.0	0.0	0.39	0.0	0.0	0.13	0.0	0.0	0.0		
25	0.0	0.0	0.10	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.59	0.0	0.02E	0.03E	0.0	0.0		
28	0.30	0.0	0.03S	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.43	0.0	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.47	0.0	0.0	0.0	0.0	0.45	0.25	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67		
STA AV	2.63	2.16	3.26	3.26	3.65	4.03	4.37	2.76	2.56	2.07	2.41	2.19		

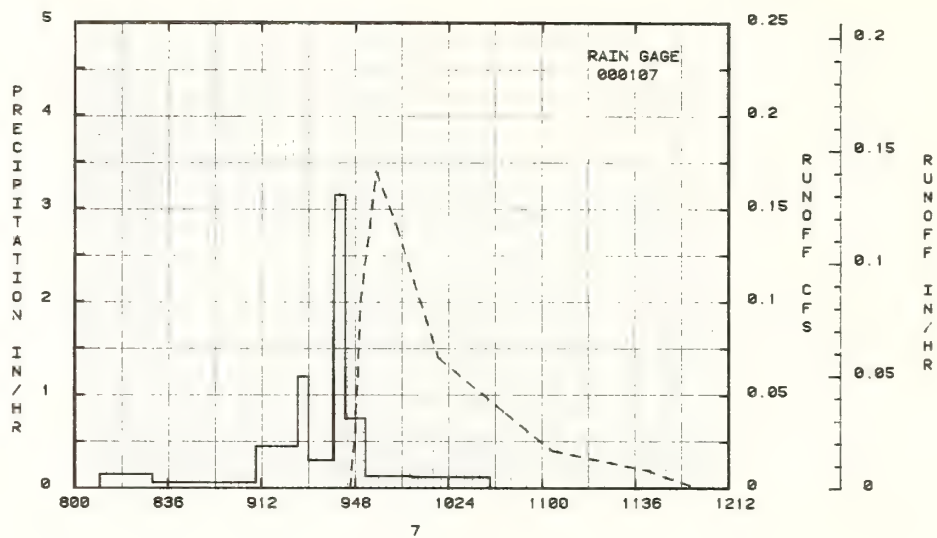
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 107. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs)						COSHOCTON, OHIO WATERSHED 110						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.065E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0028	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.006	1.647	0.0	0.0	0.0	0.0	0.0
STA AV	0.212	0.224	0.364	0.140	0.114	0.327	0.296	0.103	0.131	0.028	0.018	0.086

NOTES: To convert CFS to IN/DAY, multiply by 18.7415. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT						COSHOCTON, OHIO WATERSHED 110					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	EG 000107		7- 7	EG 000107			7- 7	946	0.0	0.0	
	0.0	0.0		810	0.0	0.0		948	0.030	0.0004	
				830	0.1500	0.05		950	0.100	0.0022	
				910	0.0600	0.09		956	0.170	0.0125	
				926	0.4500	0.21		1004	0.140	0.0290	
				930	1.2000	0.29					
				940	0.3000	0.34		1020	0.070	0.0503	
				944	3.1499	0.55		1046	0.040	0.0686	
				952	0.7500	0.65		1104	0.020	0.0758	
				1010	0.1333	0.69		1140	0.010	0.0819	
				1040	0.1200	0.75		1200	0.0	0.0829	
								1206	0.0	0.0830	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.78089764.



COSHOCTON, OHIO WATERSHED 113

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.45 acres

SOILS: (Revision) Keene silt loam - 58 percent; Coshocton silt loam - 42 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 113																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																	
1969	P	2.36	0.65	1.42	2.13	3.44	5.17	11.59	1.72	1.49	2.26	2.90	2.65	37.78																	
	Q	0.099	0.0	0.0	0.0	0.0	0.0	2.506	0.0	0.0	0.0	0.0	0.0	2.605																	
STA AV	P	2.69	2.25	3.33	3.28	3.86	4.15	4.30	2.83	2.63	2.15	2.47	2.27	36.21																	
	Q	0.244	0.364	0.301	0.140	0.117	0.327	0.232	0.159	0.075	0.038	0.018	0.058	2.073																	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																															
Maximum Discharge for Selected Time Interval																															
Date		Rate		1 Hour Date		Vol.		2 Hours Date		Vol.		6 Hours Date		Vol.		12 Hours Date		Vol.		1 Day Date		Vol.		2 Days Date		Vol.		8 Days Date		Vol.	
1969		7-27	1.251	7- 5	0.556	7- 5	0.894	7- 5	1.565	7- 5	1.624	7- 5	1.654	7- 5	1.654	6-29	1.888														
MAXIMUMS FOR PERIOD OF RECORD																															
		6-12	3.770	9- 1	1.030	4-25	1.200	7- 5	1.565	7- 5	1.624	3- 4	1.700	3- 3	2.000	3- 1	2.690														
		1957		1950		1961		1969		1969		1963		1963		1963															

NOTES: Watershed conditions: Cover of first year meadow, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26-16-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26-16-1 and 26-30-3. Precipitation data from rain gage 109. Precipitation and runoff records began Sept. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													
COSHOCTON, OHIO WATERSHED 113													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	1.38	0.0	
2	0.0	0.02H	0.0	0.15	0.0	0.83	0.0	0.0	0.16	1.17	0.27	0.0	
3	0.0	0.02H	0.0	0.0	0.0	0.0	0.03E	0.0	0.07	0.02	0.05	0.0	
4	0.0	0.0	0.0	0.12	0.0	0.0	0.45	0.0	0.0	0.0	0.04E	0.0	
5	0.0	0.0	0.0	0.51	0.0	0.11	4.76	0.0	0.15	0.0	0.0	0.0	
6	0.02S	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0	
7	0.03S	0.0	0.0	0.0	0.0	0.0	0.74	0.0	0.0	0.10	0.0	0.0	
8	0.05E	0.45	0.0	0.0	1.65	0.15	0.0	0.20	0.0	0.0	0.0	0.0	
9	0.10	0.02S	0.0	0.03E	0.27	0.0	0.0	0.88	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.06S	0.13	0.45	0.0	0.40	0.0	0.0	0.0	0.0	0.35	
11	0.0	0.0	0.05S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.13H	
12	0.0	0.04S	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.06	0.07H	0.03S	
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.08H	0.07S	
15	0.0	0.0	0.0	0.16	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.02S	
16	0.05E	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.40	0.0	0.0	0.0	0.03E	0.0	0.06	0.04	0.32	0.0	0.05	0.0	
18	0.34	0.0	0.0	0.45	0.38	0.05E	0.0	0.0	0.0	0.0	0.05	0.0	
19	0.0	0.0	0.0	0.0	0.16	0.0	0.37	0.60	0.0	0.0	0.70H	0.0	
20	0.12	0.0	0.19	0.0	0.0	0.0	1.42	0.0	0.0	0.80	0.0	0.0	
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S	
22	0.0	0.0	0.0	0.18	0.0	0.10	0.20	0.0	0.0	0.0	0.0	0.11S	
23	0.0	0.0	0.0	0.07	0.0	1.79	0.0	0.0	0.0	0.0	0.21	0.08S	
24	0.0	0.0	0.85	0.0	0.0	0.36	0.0	0.0	0.08	0.0	0.0	0.0	
25	0.0	0.0	0.15	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.12S	
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	2.79	0.0	0.02E	0.04	0.0	0.0	
28	0.33	0.0	0.06H	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.44		0.06H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S	
30	0.48		0.0	0.0	0.0	0.37	0.37	0.0	0.0	0.0	0.0	0.30S	
31	0.0		0.0		0.0		0.0	0.0		0.0		0.24S	
TOTAL	2.36	0.65	1.42	2.13	3.44	5.17	11.59	1.72	1.49	2.26	2.90	2.65	
STA AV	2.69	2.25	3.33	3.28	3.86	4.15	4.30	2.83	2.63	2.15	2.47	2.27	

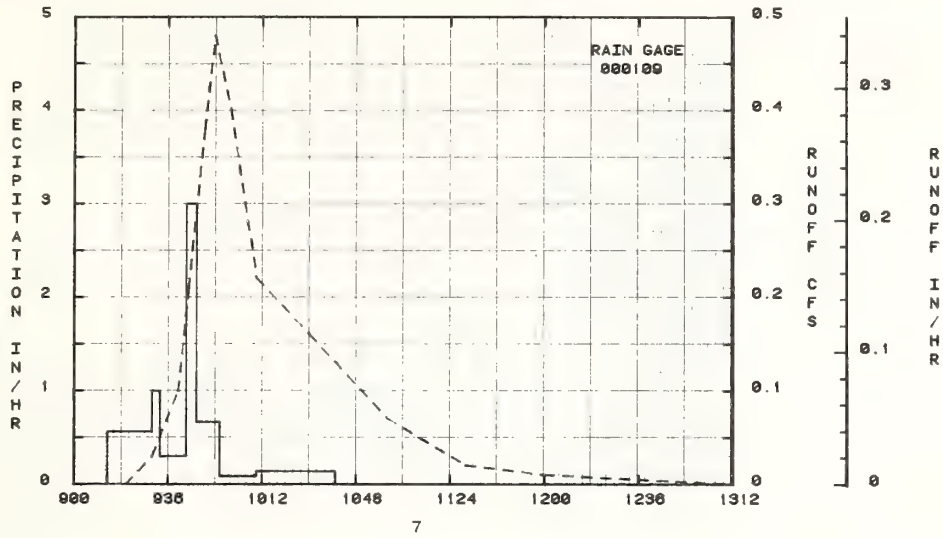
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26-035-1. Precipitation amounts are for rain gage 109. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 113												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.101E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.014E	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.038	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0002	0.0	0.0	0.0	0.0	0.0	0.0049	0.0	0.0	0.0	0.0	0.0
INCHES	0.099	0.0	0.0	0.0	0.0	0.0	2.506	0.0	0.0	0.0	0.0	0.0
STA AV	0.244	0.364	0.301	0.140	0.117	0.327	0.232	0.159	0.075	0.038	0.018	0.058

NOTES: To convert CFS to IN/DAY, multiply by 16.4150. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 113										
ANTECEDENT CONDITIONS			RAINFALL							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
7- 7	RG 000109	0.0	7- 7	RG 000109			7- 7	920	0.0	0.0
	0.09			913	0.0	0.0		930	0.030	0.0017
				930	0.5647	0.16		940	0.100	0.0089
				933	1.0001	0.21		944	0.210	0.0159
				943	0.2999	0.26		950	0.380	0.0364
				947	3.0002	0.46				
WATERSHED CONDITIONS:				956	0.6666	0.56		954	0.480	0.0559
25-50%, 3" legumes and grass;				1010	0.0857	0.58		1000	0.400	0.0864
0-25%, 3" weeds; 95% density.				1040	0.1400	0.65		1010	0.220	0.1213
								1030	0.160	0.1652
								1100	0.070	0.2052
								1130	0.020	0.2221
								1200	0.010	0.2274
								1400	0.0	0.2329
								1500	0.0	0.2336

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.68395862.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 113

COSHOCTON, OHIO WATERSHED 118

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.96 acres

SOILS: (Revision) Coshocton silt loam - 85 percent; Clarksburg silt loam - 15 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.E., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)													COSHOCTON, OHIO WATERSHED 118				
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.35	0.73	1.37	2.11	3.46	5.32	11.02	1.68	1.36	2.18	2.88	2.72	37.18			
	Q	0.240	0.095	0.0	0.009	0.010	0.0	2.941	0.0	0.0	0.0	0.0	0.030	3.325			
STA AV	P	2.79	2.33	3.44	3.36	3.83	4.09	4.36	2.85	2.73	2.09	2.59	2.33	36.78			
	Q	0.283	0.339	0.502	0.206	0.119	0.364	0.248	0.215	0.122	0.010	0.038	0.086	2.530			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days	
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-27	0.774	7- 5	0.493	7- 5	0.788	7- 5	1.521	7- 5	1.611	7- 5	1.745	7- 5	1.842	7- 3	2.350
MAXIMUMS FOR PERIOD OF RECORD																	
		6-12	3.110	9- 1	1.300	9- 1	1.590	9- 1	1.600	7- 5	1.611	3- 9	1.900	3- 9	2.410	7- 3	2.350
		1957		1950		1950		1950		1969		1964		1964		1969	

NOTES: Watershed conditions: Cover of first year meadow, prevailing practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.17-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.17-1 and 26.30-3. Precipitation data from rain gage 108. Precipitation and runoff records began Jan. 1940. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 118	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	1.40	0.0		
2	0.0	0.02M	0.0	0.16	0.0	0.8E	0.0	0.0	0.12	1.16	0.25	0.0		
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.05	0.0	0.08	0.04	0.05E	0.0		
4	0.0	0.0	0.0	0.14	0.0	0.0	0.36	0.0	0.0	0.0	0.05E	0.0		
5	0.0	0.0	0.0	0.55	0.0	0.11	4.65	0.0	0.10	0.0	0.0	0.0		
6	0.02S	0.10S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0		
7	0.03S	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.09	0.0	0.63		
8	0.05E	0.50	0.0	0.0	1.70	0.13	0.0	0.20	0.0	0.0	0.0	0.0		
9	0.10	0.02M	0.0	0.05	0.22	0.0	0.0	0.88	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.11	0.43	0.0	0.39	0.0	0.0	0.0	0.0	0.40		
11	0.0	0.0	0.05S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.13M		
12	0.0	0.04S	0.0	0.0	0.0	0.51	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.05	0.11M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.05	0.11M	0.07S		
15	0.0	0.0	0.0	0.15	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.40	0.0	0.0	0.0	0.05E	0.0	0.05E	0.04	0.33	0.0	0.02E	0.0		
18	0.35	0.0	0.0	0.40	0.33	0.05	0.0	0.0	0.0	0.0	0.03E	0.0		
19	0.0	0.0	0.0	0.0	0.18	0.0	0.50	0.56	0.0	0.0	0.66S	0.0		
20	0.10	0.0	0.19	0.0	0.0	0.0	1.42	0.0	0.0	0.75	0.0	0.0		
21	0.0	0.0	0.0	0.12E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.06	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.08	0.0	1.72	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.84	0.0	0.0	0.40	0.0	0.0	0.07	0.0	0.0	0.0		
25	0.0	0.0	0.15	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.47	0.0	0.02E	0.04	0.0	0.0		
28	0.32	0.0	0.05M	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.45	0.0	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.48	0.0	0.0	0.0	0.0	0.45	0.32	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.35	0.73	1.37	2.11	3.46	5.32	11.02	1.68	1.36	2.18	2.88	2.72		
STA AV	2.79	2.33	3.44	3.36	3.83	4.09	4.36	2.85	2.73	2.09	2.59	2.33		

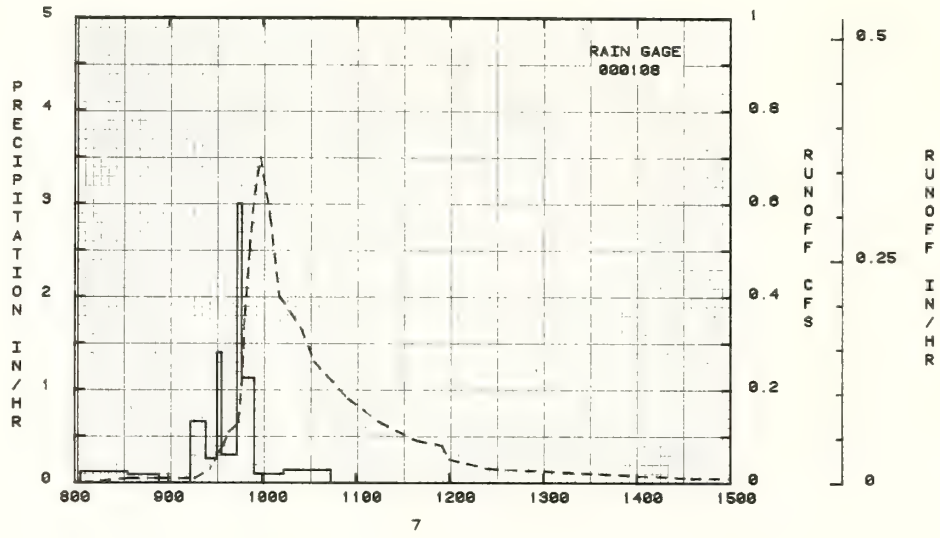
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 108. STA AV based on 30 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 118												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.001	0.0	0.0	0.142	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.031	0.0	0.0	0.0	0.0	0.0
8	0.0	0.001	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
9	0.0	0.001	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.001	0.0	0.005	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0 T	0.0	0.001	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.042	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
29	0.006		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.008		0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
31	0.006		0.0		0.0		0.0	0.0	0.0	0.0		0.002
MEAN	0.0006	0.0003	0.0	0.0	0.0	0.0	0.0078	0.0	0.0	0.0	0.0	0.0001
INCHES	0.240	0.095	0.0	0.009	0.010	0.0	2.941	0.0	0.0	0.0	0.0	0.030
STA AV	0.283	0.339	0.502	0.206	0.119	0.364	0.248	0.215	0.122	0.010	0.038	0.086

NOTES: To convert CFS to IN/DAY, multiply by 12.1438. STA AV based on 30 yr period.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 118										
ANTECEDENT CONDITIONS			RAINFALL							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
RG 000108			RG 000108							
7- 7	0.0	0.010	7- 7		0.0	0.0	7- 7	805	0.0	0.0
				804	0.1200	0.06		835	0.010	0.0011
				854	0.0900	0.09		855	0.010	0.0029
				914	0.0	0.09		917	0.010	0.0055
				924	0.6600	0.20		927	0.030	0.0076
WATERSHED CONDITIONS: Newly baled legumes, grass and weeds.				931	0.2571	0.23		935	0.080	0.0116
				934	1.3998	0.30		939	0.110	0.0149
				944	0.3000	0.35		945	0.130	0.0212
				947	2.9999	0.50		947	0.210	0.0239
				955	1.1251	0.65		949	0.360	0.0290
				1014	0.0947	0.68		952	0.500	0.0393
				1044	0.1400	0.75		955	0.620	0.0538
								959	0.700	0.0759
								1005	0.570	0.1085
								1011	0.400	0.1326
								1025	0.330	0.1761
								1033	0.260	0.1961
								1055	0.180	0.2374
								1115	0.130	0.2642
								1139	0.090	0.2872
								1155	0.080	0.2987
								1200	0.050	0.3014
								1225	0.030	0.3100
								1435	0.010	0.3369
								1525	0.010	0.3420
								1630	0.010	0.3467
								2400	0.0	0.3676

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.50598980.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 118

COSHOCTON, OHIO WATERSHED 111

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.18 acres

SOILS: (Revision) Keene silt loam - 58 percent; Coshocton silt loam - 42 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)								COSHOCTON, OHIO		WATERSHED 111									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	2.36	0.65	1.42	2.13	3.44	5.17	11.59	1.72	1.49	2.26	2.90	2.65	37.78					
	Q	0.336	0.0	0.023	0.0	0.0	0.0	3.658	0.0	0.0	0.0	0.0	0.0	4.017					
STA AV	P	2.69	2.25	3.33	3.28	3.86	4.15	4.30	2.83	2.63	2.15	2.47	2.27	36.21					
	Q	0.492	0.534	0.644	0.281	0.182	0.299	0.206	0.046	0.075	0.018	0.028	0.209	3.013					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7- 5	1.260	7- 5	0.662	7- 5	1.095	7- 5	1.990	7- 5	2.067	7- 5	2.259	7- 5	2.259	6-29	2.615		
MAXIMUMS FOR PERIOD OF RECORD																			
		6-12 1957	3.830	6-12 1957	1.330	6-12 1957	1.420	7- 5 1969	1.990	7- 5 1969	2.067	1-26 1952	2.600	1-25 1952	2.610	1-19 1952	3.080		

NOTES: Watershed conditions: Cover of first year meadow, improved practice plus mulch tillage. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.18-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.18-1 and 26.30-3. Precipitation data from rain gage 109. Precipitation and runoff records began Sept. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 111	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	1.38	0.0		
2	0.0	0.02M	0.0	0.15	0.0	0.83	0.0	0.0	0.16	1.17	0.27	0.0		
3	0.0	0.02M	0.0	0.0	0.0	0.0	0.03E	0.0	0.07	0.02	0.05	0.0		
4	0.0	0.0	0.0	0.12	0.0	0.0	0.45	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.51	0.0	0.11	4.76	0.0	0.15	0.0	0.0	0.0		
6	0.02S	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0		
7	0.03S	0.0	0.0	0.0	0.0	0.0	0.74	0.0	0.0	0.10	0.0	0.61		
8	0.05E	0.45	0.0	0.0	1.65	0.15	0.0	0.20	0.0	0.0	0.0	0.0		
9	0.10	0.02S	0.0	0.03E	0.27	0.0	0.0	0.88	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.06S	0.13	0.45	0.0	0.40	0.0	0.0	0.0	0.0	0.35		
11	0.0	0.0	0.05S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.13M		
12	0.0	0.04S	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.06	0.07M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.08M	0.07S		
15	0.0	0.0	0.0	0.16	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.40	0.0	0.0	0.0	0.03E	0.0	0.06	0.04	0.32	0.0	0.05	0.0		
18	0.34	0.0	0.0	0.45	0.38	0.05E	0.0	0.0	0.0	0.0	0.05	0.0		
19	0.0	0.0	0.0	0.0	0.16	0.0	0.37	0.60	0.0	0.0	0.70M	0.0		
20	0.12	0.0	0.19	0.0	0.0	0.0	1.42	0.0	0.0	0.80	0.0	0.0		
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.18	0.0	0.10	0.20	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.07	0.0	1.79	0.0	0.0	0.0	0.0	0.21	0.08S		
24	0.0	0.0	0.85	0.0	0.0	0.36	0.0	0.0	0.08	0.0	0.0	0.0		
25	0.0	0.0	0.15	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.79	0.0	0.02E	0.04	0.0	0.0		
28	0.33	0.0	0.06M	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.44	0.06M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.48	0.0	0.0	0.0	0.0	0.37	0.37	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.36	0.65	1.42	2.13	3.44	5.17	11.59	1.72	1.49	2.26	2.90	2.65		
STA AV	2.69	2.25	3.33	3.28	3.86	4.15	4.30	2.83	2.63	2.15	2.47	2.27		

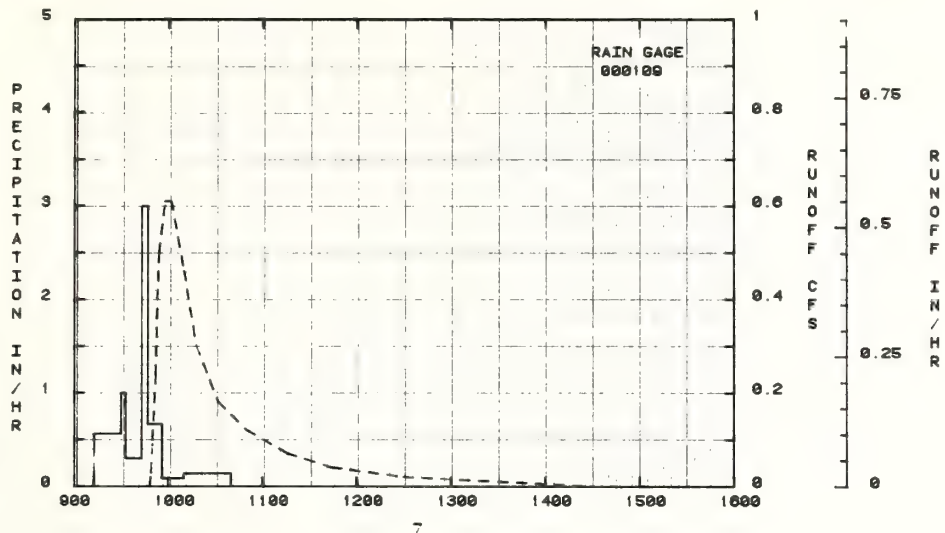
NOTES: For daily air temperatures in the vicinity, see table for Watershed #95, p. 26.035-1. Precipitation amounts are for rain gage 109. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 111												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.110	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.018	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.052	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.002		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.014E		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.001E		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0005	0.0	0.0	0.0	0.0	0.0	0.0059	0.0	0.0	0.0	0.0	0.0
INCHES	0.336	0.0	0.023	0.0	0.0	0.0	3.658	0.0	0.0	0.0	0.0	0.0
STA AV	0.492	0.534	0.644	0.281	0.182	0.299	0.206	0.046	0.075	0.018	0.028	0.209

NOTES: To convert CFS to IN/DAY, multiply by 20.1710. STA AV based on 31 yr period, part-year records included.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 111		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 000109			RG 000109								
7- 7	0.09	0.0	7- 7	913	0.0	0.0	7- 7	940	0.0	0.0	
				930	0.5647	0.16		948	0.0	0.0002	
				933	1.0001	0.21		949	0.030	0.0005	
				943	0.2999	0.26		950	0.100	0.0013	
				947	3.0002	0.46		952	0.240	0.0057	
WATERSHED CONDITIONS:				956	0.6666	0.56		953	0.400	0.0109	
75-100%, 15" legumes and				1010	0.0857	0.58		954	0.500	0.0168	
grass; 0-25%, 12" weeds;				1040	0.1400	0.65		958	0.610	0.0478	
97%, density.								1002	0.610	0.0820	
								1010	0.460	0.1417	
								1018	0.300	0.1838	
								1032	0.180	0.2311	
								1050	0.120	0.2693	
								1116	0.070	0.3030	
								1144	0.040	0.3241	
								1230	0.020	0.3425	
								1330	0.010	0.3517	
								1430	0.0	0.3551	
								1500	0.0	0.3555	
								1530	0.0	0.3555	
								1550	0.0	0.3555	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.84045763.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 111

COSHOCTON, OHIO WATERSHED 121

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.42 acres

SOILS: (Revision) Berks shaly silt loam - 79 percent; Rayne silt loam - 14 percent; Clarksburg silt loam - 7 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 121	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	2.16	0.60	1.25	2.02	3.09	5.24	10.64	1.66	1.27	2.23	2.73	2.54	35.43	
	Q	0.698	0.164	0.0	0.0	0.0	0.0	1.468	0.020	0.0	0.0	0.0	0.0	2.350	
STA AV	P	2.64	2.11	3.17	3.18	3.69	4.09	4.50	2.78	2.60	2.08	2.37	2.16	35.39	
	Q	0.200	0.194	0.321	0.160	0.066	0.218	0.225	0.123	0.075	0.018	0.010	0.031	1.640	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-27	2.207	7-27	0.588	7-27	0.667	7-27	0.719	7-27	0.786	7-27	0.790	7-26	0.790
														7-20	0.937
MAXIMUMS FOR PERIOD OF RECORD															
		8-23	7.820	9-1	1.320	9-1	1.390	9-1	1.390	9-1	1.390	9-1	1.390	3-3	1.660
		1944		1950		1950		1950		1950		1950		1963	1.870

NOTES: Watershed conditions: Cover of wheat to meadow, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.20-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.19-1 and 26.30-3. Precipitation data from rain gage 113. Precipitation records began Apr. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 121	
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	1.30	0.0		
2	0.0	0.0	0.02M	0.0	0.14	0.0	0.89	0.0	0.0	0.11	1.19	0.25	0.0		
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.05	0.0		
4	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.33	0.0	0.0	0.0	0.03E	0.0		
5	0.0	0.0	0.0	0.0	0.46	0.0	0.11	4.45	0.0	0.18	0.0	0.0	0.0		
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.10	0.0	0.56		
8	0.05E	0.45	0.0	0.0	0.0	1.65	0.12	0.0	0.15E	0.0	0.0	0.0	0.0		
9	0.10	0.0	0.0	0.05E	0.22	0.0	0.0	0.87	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.10	0.38	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.35		
11	0.0	0.0	0.05S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09M		
12	0.0	0.05S	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.06	0.10M	0.02S		
14	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.10E	0.11M	0.04S		
15	0.0	0.0	0.0	0.0	0.16	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.03S		
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.06E	0.31	0.0	0.02E	0.0		
18	0.31	0.0	0.0	0.0	0.50	0.36	0.03E	0.0	0.0	0.0	0.0	0.03E	0.01S		
19	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.70	0.58	0.0	0.0	0.64S	0.0		
20	0.10	0.0	0.16	0.0	0.0	0.0	0.0	1.49	0.0	0.0	0.75	0.0	0.0		
21	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.04	0.0	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.62	0.0	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.79	0.0	0.0	0.37	0.0	0.0	0.0	0.10	0.0	0.0	0.0		
25	0.0	0.0	0.11	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.18	0.0	0.02E	0.03E	0.0	0.0		
28	0.31	0.0	0.05M	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.45	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.45	0.0	0.0	0.0	0.0	0.0	0.53	0.25	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL		2.16	0.60	1.25	2.02	3.09	5.24	10.64	1.66	1.27	2.23	2.73	2.54		
STA AV		2.64	2.11	3.17	3.18	3.69	4.09	4.50	2.78	2.60	2.08	2.37	2.16		

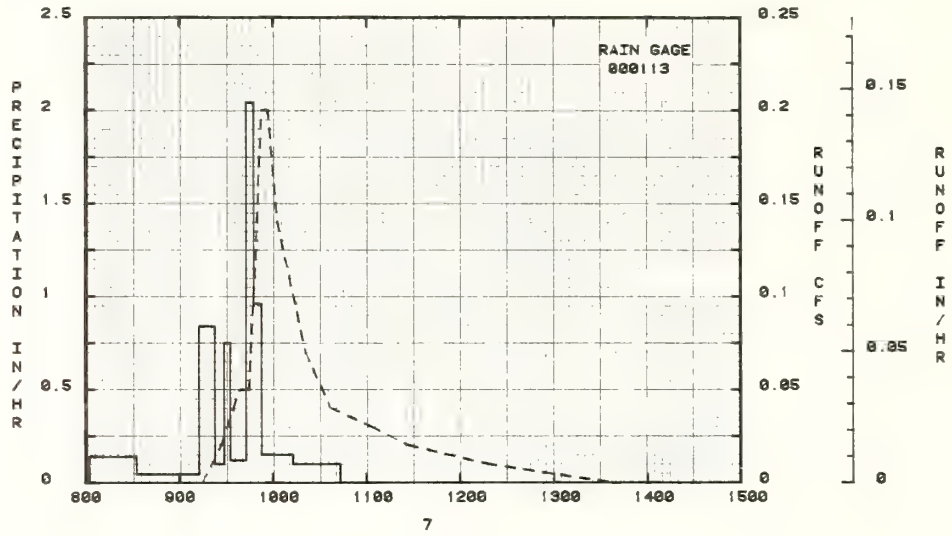
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 113. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 121												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.001E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.020E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
8	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.001E	0.0	0.0	0.0	0.0	0.0	0.001E	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.009	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.047	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
29	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.018	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
31	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0013	0.0004	0.0	0.0	0.0	0.0	0.0028	0.0	0.0	0.0	0.0	0.0
INCHES	0.698	0.164	0.0	0.0	0.0	0.0	1.468	0.020	0.0	0.0	0.0	0.0
STA AV	0.200	0.194	0.321	0.160	0.066	0.218	0.225	0.123	0.075	0.018	0.010	0.031

NOTES: To convert CFS to IN/DAY, multiply by 16.7618. STA AV based on 31 yr period, part-year records included.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 121				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.			
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)			
EVENT OF JULY 7, 1969													
RG 000113			RG 000113										
7- 7	0.0	0.0	7- 7	803	0.0	0.0	7- 7	915	0.0	0.0			
				833	0.1400	0.07		927	0.020	0.0011			
				913	0.0450	0.10		935	0.040	0.0037			
				923	0.8400	0.24		939	0.050	0.0057			
				929	0.0999	0.25		945	0.050	0.0090			
WATERSHED CONDITIONS:													
75-100%, 57" wheat; 0-25%,			933			0.7500	0.30	949			0.120	0.0128	
36" weeds; 95% density.			943			0.1200	0.32	953			0.200	0.0201	
			948			2.0400	0.49	957			0.200	0.0292	
			953			0.9600	0.57	1003			0.140	0.0406	
			1013			0.1500	0.62	1021			0.070	0.0621	
			1043			0.1000	0.67	1037			0.040	0.0721	
									1103			0.030	0.0829
									1127			0.020	0.0899
									1217			0.010	0.0992
									1337			0.0	0.1066
									1404			0.0	0.1075
									1704			0.0	0.1096
									2014			0.0	0.1106

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.69840845.



COSHOCTON, OHIO WATERSHED 106

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 1.56 acres

SOILS: (Revision) Berks shaly silt loam - 69 percent; Rayne silt loam - 31 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Barrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)										COSHOCTON, OHIO WATERSHED 106								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual				
1969	P	2.16	0.60	1.25	2.02	3.09	5.24	10.64	1.66	1.27	2.23	2.73	2.54	35.43				
	Q	0.692	0.004	0.0	0.0	0.016	0.019	1.097	0.016	0.0	0.0	0.0	0.0	1.844				
STA AV	P	2.64	2.11	3.17	3.18	3.69	4.09	4.50	2.78	2.60	2.08	2.37	2.16	35.39				
	Q	0.238	0.224	0.146	0.122	0.120	0.294	0.319	0.207	0.160	0.019	0.029	0.079	1.956				
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																		
	Maximum Discharge Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	Maximum Volume for Selected Time Interval		6 Hours Date	Vol.	12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.
1969	7-27	2.008	7-27	0.438	7-27	0.485	7-27	0.515	7-27	0.548	7-26	0.548	7-25	0.548	7-20	0.625		
MAXIMUMS FOR PERIOD OF RECORD																		
	8-23 1964	7.630	9- 1 1950	1.260	9- 1 1950	1.380	9- 1 1950	1.390	2-23 1960	1.410	2-23 1962	1.410	2-23 1962	2.000	2-19 1962	2.440		

NOTES: Watershed conditions: Cover of wheat to meadow, prevailing practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.20-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.20-1 and 26.30-3. Precipitation data from rain gage 113. Precipitation and runoff records began Apr. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969	DAILY PRECIPITATION (inches)												COSHOCTON, OHIO WATERSHED 106	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	1.30	0.0		
2	0.0	0.02M	0.0	0.14	0.0	0.89	0.0	0.0	0.11	1.19	0.25	0.0		
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.05	0.0		
4	0.0	0.0	0.0	0.11	0.0	0.0	0.33	0.0	0.0	0.0	0.03E	0.0		
5	0.0	0.0	0.0	0.46	0.0	0.11	4.45	0.0	0.18	0.0	0.0	0.0		
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.10	0.0	0.56		
8	0.05E	0.45	0.0	0.0	1.65	0.12	0.0	0.15E	0.0	0.0	0.0	0.0		
9	0.10	0.0	0.0	0.05E	0.22	0.0	0.0	0.87	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.10	0.38	0.0	0.39	0.0	0.0	0.0	0.0	0.35		
11	0.0	0.0	0.05S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.09M		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.06	0.10M	0.02S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.10E	0.11M	0.04S		
15	0.0	0.0	0.0	0.16	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.03S		
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.34	0.0	0.0	0.0	0.0	0.0	0.11	0.06E	0.31	0.0	0.02E	0.0		
18	0.31	0.0	0.0	0.50	0.36	0.03E	0.0	0.0	0.0	0.0	0.03E	0.01S		
19	0.0	0.0	0.0	0.0	0.03E	0.0	0.70	0.58	0.0	0.0	0.64S	0.0		
20	0.10	0.0	0.16	0.0	0.0	0.0	1.49	0.0	0.0	0.75	0.0	0.0		
21	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.04	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.62	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.79	0.0	0.0	0.37	0.0	0.0	0.10	0.0	0.0	0.0		
25	0.0	0.0	0.11	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.18	0.0	0.02E	0.03E	0.0	0.0		
28	0.31	0.0	0.05M	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.45	0.0	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.45	0.0	0.0	0.0	0.0	0.53	0.25	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.16	0.60	1.25	2.02	3.09	5.24	10.64	1.66	1.27	2.23	2.73	2.54		
STA AV	2.64	2.11	3.17	3.18	3.69	4.09	4.50	2.78	2.60	2.08	2.37	2.16		

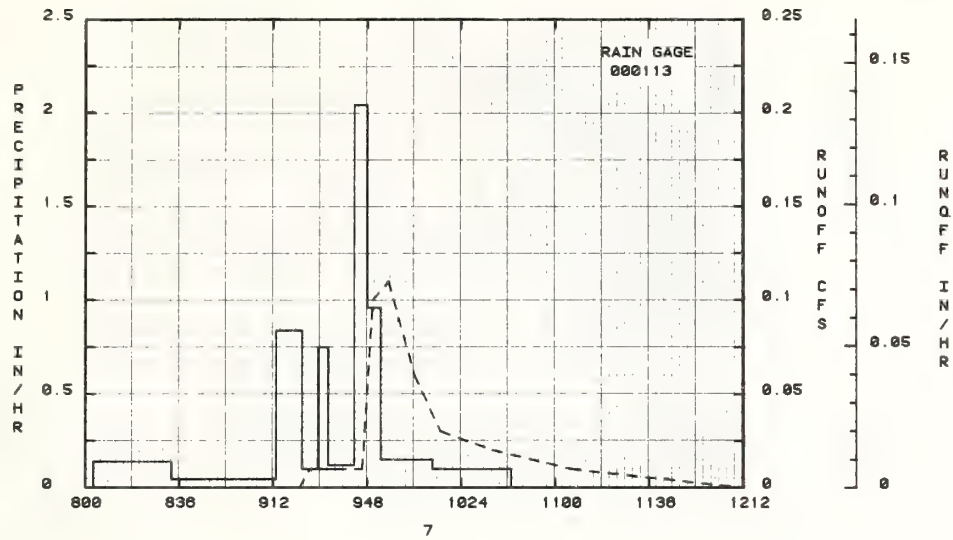
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 113. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 106												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.027	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.001	0.0	0.0	T	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.012E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.036	0.0	0.0	0.0	0.0	0.0
28	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.006	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0
31	0.001E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0015	0.0	0.0	0.0	0.0	0.0	0.0023	0.0	0.0	0.0	0.0	0.0
INCHES	0.692	0.004	0.0	0.0	0.016	0.019	1.097	0.016	0.0	0.0	0.0	0.0
STA AV	0.238	0.224	0.146	0.122	0.120	0.294	0.319	0.207	0.160	0.019	0.029	0.079

NOTES: To convert CFS to IN/DAY, multiply by 15.2576. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 106											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 000113											
7- 7	0.0	0.0	7- 7	803	0.0	0.0	7- 7	922	0.0	0.0	
				833	0.1400	0.07		926	0.010	0.0001	
				913	0.0450	0.10		930	0.010	0.0004	
				923	0.8400	0.24		932	0.010	0.0006	
				929	0.0999	0.25		936	0.010	0.0010	
WATERSHED CONDITIONS: 75-100% 52" wheat; 0-25% 36" weeds; 98% density.											
				933	0.7500	0.30		946	0.010	0.0023	
				943	0.1200	0.32		950	0.100	0.0046	
				948	2.0400	0.49		956	0.110	0.0110	
				953	0.9600	0.57		1006	0.060	0.0200	
				1013	0.1500	0.62		1016	0.030	0.0248	
				1043	0.1000	0.67		1036	0.020	0.0301	
								1106	0.010	0.0352	
								1236	0.0	0.0419	
								1506	0.0	0.0435	

NOTES: To convert runoff in CFS, to IN/HR, multiply by 0.63573077.



COSHOCTON, OHIO WATERSHED 188

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 2.05 acres

SOILS: (Revision) Payne silt loam - 80 percent; Glenford silt loam - 20 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Barroid, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)													COSHOCTON, OHIO WATERSHED 188	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	2.16	0.66	1.22	1.80	3.00	5.14	10.78	1.66	1.19	2.25	2.73	2.66	35.25
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.536	0.0	0.0	0.0	0.0	0.0	0.536
STA AV	P	2.58	2.14	3.15	3.16	3.83	4.00	4.36	2.87	2.59	2.09	2.38	2.17	35.32
	Q	0.160	0.159	0.234	0.094	0.094	0.261	0.102	0.159	0.131	0.046	0.018	0.028	1.486
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date						
1969	7-27	1.195	7-27	0.420	7-27	0.471	7-27	0.474	7-28	0.523	7-27	0.523	7-27	0.523
MAXIMUMS FOR PERIOD OF RECORD														
	8-23	3.060	9-1	1.840	9-1	2.070	9-1	2.080	9-1	2.080	9-1	2.080	3-3	2.340
	1944		1950		1950		1950		1950		1950		1963	1963

NOTES: Watershed conditions: Cover of wheat to meadow, improved practice plus deep plowing. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.21-4. For Geology Description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.21-1 and 26.30-3. Precipitation data from rain gage 115. Precipitation and runoff records began Sept. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969	DAILY PRECIPITATION (inches)												COSHOCTON, OHIO WATERSHED 188	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0	1.40	0.0		
2	0.0	0.02M	0.0	0.10	0.0	0.83	0.0	0.0	0.11	1.15	0.21	0.0		
3	0.0	0.02M	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.03E	0.0		
4	0.0	0.0	0.0	0.12	0.0	0.0	0.29	0.0	0.0	0.0	0.02E	0.0		
5	0.0	0.0	0.0	0.40	0.0	0.09	4.47	0.0	0.10	0.0	0.0	0.0		
6	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.07	0.0	0.61		
8	0.05E	0.47	0.0	0.0	1.55	0.11	0.0	0.15E	0.0	0.0	0.0	0.0		
9	0.10	0.02S	0.0	0.05E	0.18	0.0	0.0	0.86	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.02S	0.09	0.37	0.0	0.33	0.0	0.0	0.0	0.0	0.40		
11	0.0	0.0	0.03S	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.09M		
12	0.0	0.06S	0.0	0.0	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.04	0.08M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.06	0.08M	0.07S		
15	0.0	0.0	0.0	0.12	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.40	0.0	0.0	0.0	0.05	0.0	0.12	0.11	0.34	0.0	0.02	0.0		
18	0.29	0.0	0.0	0.49	0.32	0.03E	0.0	0.0	0.0	0.0	0.03	0.0		
19	0.0	0.0	0.0	0.0	0.11	0.0	0.65	0.54	0.0	0.0	0.66S	0.0		
20	0.10	0.0	0.15	0.0	0.0	0.0	1.39	0.0	0.0	0.90	0.0	0.0		
21	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.10	0.0	0.10	0.03	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.11	0.0	1.65	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.82	0.0	0.0	0.39	0.0	0.0	0.08	0.0	0.0	0.0		
25	0.0	0.0	0.10E	0.0	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.42	0.0	0.02E	0.03E	0.0	0.0		
28	0.32	0.0	0.05M	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.42	0.0	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.43	0.0	0.0	0.0	0.0	0.55	0.39	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.16	0.66	1.22	1.80	3.00	5.14	10.78	1.66	1.19	2.25	2.73	2.66		
STA AV	2.58	2.14	3.15	3.16	3.83	4.00	4.36	2.87	2.59	2.09	2.38	2.17		

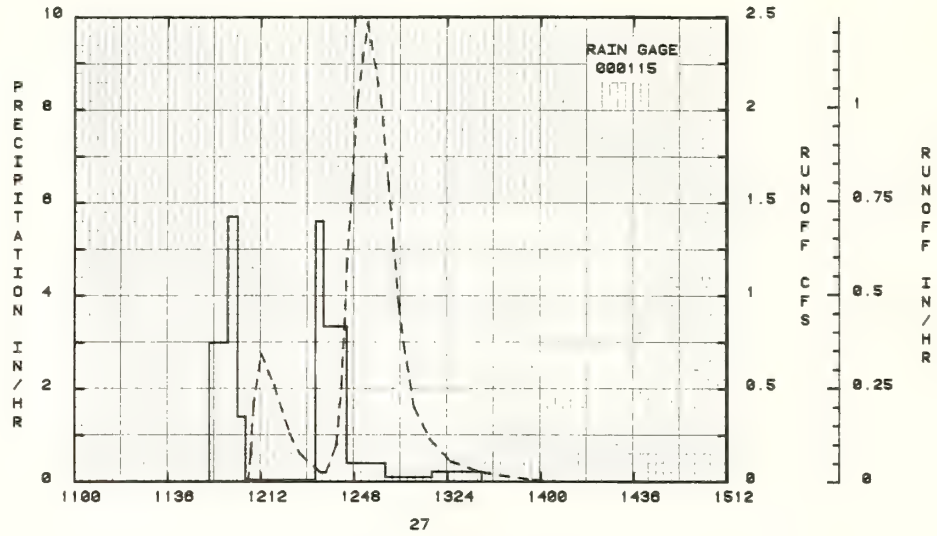
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 115. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 188												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.045	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0015	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.536	0.0	0.0	0.0	0.0	0.0
STA AV	0.160	0.159	0.234	0.094	0.094	0.261	0.102	0.159	0.131	0.046	0.018	0.028

NOTES: To convert CFS to IN/DAY, multiply by 11.6106. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 188										
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 27, 1969										
RG 000115			RG 000115							
7-27	0.0	0.0	7-27	1152	0.0	0.0	7-27	1207	0.0	0.0
				1159	3.0000	0.35		1208	0.17	0.0008
				1203	5.6998	0.73		1209	0.40	0.0030
				1206	1.4001	0.80		1212	0.70	0.0165
				1233	0.0445	0.82		1217	0.53	0.0408
WATERSHED CONDITIONS: Wheat, 100%, 49" high, density, 99%.				1236	5.6000	1.10		1223	0.26	0.0602
				1245	3.3333	1.60		1227	0.16	0.0669
				1300	0.4000	1.70		1235	0.05	0.0736
				1318	0.1000	1.73		1237	0.05	0.0744
				1337	0.2211	1.80		1241	0.21	0.0786
								1243	0.53	0.0848
								1244	0.83	0.0899
								1245	1.15	0.0993
								1247	1.61	0.1202
								1249	2.06	0.1514
								1253	2.47	0.2242
								1258	2.06	0.3141
								1301	1.61	0.3592
								1303	1.29	0.3811
								1305	0.95	0.4002
								1307	0.75	0.4131
								1311	0.40	0.4316
								1317	0.24	0.4473
								1325	0.11	0.4585
								1337	0.05	0.4665
								1357	0.01	0.4717
								1407	0.0	0.4721

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.4837756.



EVENT OF JULY 27, 1969
COSHOCOTON, OHIO WATERSHED 188

COSHOCTON, OHIO WATERSHED 185

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 7.40 acres

SOILS: (Revision) Rayne silt loam - 62 percent; Coshocton silt loam - 15 percent; Berks shaly silt loam - 14 percent; Clarksburg silt loam - 8 percent; Dekalb channery sandy loam - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)										COSHOCTON, OHIO WATERSHED 185							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.31	0.73	1.36	1.95	3.17	5.05	10.74	1.62	1.12	2.23	2.78	2.66	35.72			
	Q	0.153	0.022	0.0	0.0	0.0	0.078	1.736	0.0	0.0	0.004	0.012	0.011	2.016			
STA AV	P	2.69	2.15	3.22	3.21	3.75	3.87	4.29	2.82	2.57	2.05	2.38	2.21	35.20			
	Q	0.141	0.217	0.333	0.130	0.116	0.264	0.228	0.112	0.131	0.047	0.019	0.051	1.788			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days	
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7- 5	0.821	7- 5	0.374	7- 5	0.494	7- 5	0.977	7- 5	1.100	7- 5	1.198	7- 5	1.217	7- 2	1.328
MAXIMUMS FOR PERIOD OF RECORD																	
		6-16	3.350	9- 1	1.910	9- 1	2.310	9- 1	2.320	3- 4	2.420	3- 4	2.880	3- 3	3.550	3- 1	4.110
		1946		1950		1950		1950		1963		1963		1963		1963	

NOTES: Watershed conditions: From strip cropping to no plow corn. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.23-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.23-1 and 26.30-3. Precipitation data from rain gage 128. Precipitation and runoff records began Sept. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 185	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.41	0.0		
2	0.0	0.02S	0.0	0.15	0.0	0.80	0.0	0.0	0.11	1.22	0.23	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.04E	0.0		
4	0.0	0.0	0.0	0.15	0.0	0.0	0.30	0.0	0.0	0.0	0.03E	0.0		
5	0.0	0.0	0.0	0.45	0.0	0.10	4.45	0.0	0.10	0.0	0.0	0.0		
6	0.0	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.0	0.0	0.09	0.0	0.64		
8	0.05E	0.50	0.0	0.0	1.65	0.12	0.0	0.10	0.0	0.0	0.0	0.0		
9	0.15	0.03M	0.0	0.05E	0.24	0.0	0.0	0.92	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.10	0.42	0.0	0.38	0.0	0.0	0.0	0.0	0.35		
11	0.0	0.0	0.04S	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.11M		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.04	0.06M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.05	0.07M	0.07S		
15	0.0	0.0	0.0	0.13	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.40	0.0	0.0	0.0	0.03	0.0	0.12	0.07	0.30	0.0	0.04E	0.0		
18	0.33	0.0	0.0	0.50	0.35	0.05E	0.0	0.0	0.0	0.0	0.04E	0.0		
19	0.0	0.0	0.0	0.0	0.07	0.0	0.70	0.53	0.0	0.0	0.66S	0.0		
20	0.10	0.0	0.19	0.0	0.0	0.0	1.44	0.0	0.0	0.80	0.0	0.0		
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.10	0.0	0.10	0.03	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.09	0.0	1.61	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.86	0.0	0.0	0.40	0.0	0.0	0.08	0.0	0.0	0.0		
25	0.0	0.0	0.14	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.31	0.0	0.0	0.03	0.0	0.0		
28	0.32	0.0	0.04M	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.47	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.44	0.0	0.0	0.0	0.0	0.50	0.31	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.31	0.73	1.36	1.95	3.17	5.05	10.74	1.62	1.12	2.23	2.78	2.66		
STA AV	2.69	2.15	3.22	3.21	3.75	3.87	4.29	2.82	2.57	2.35	2.38	2.21		

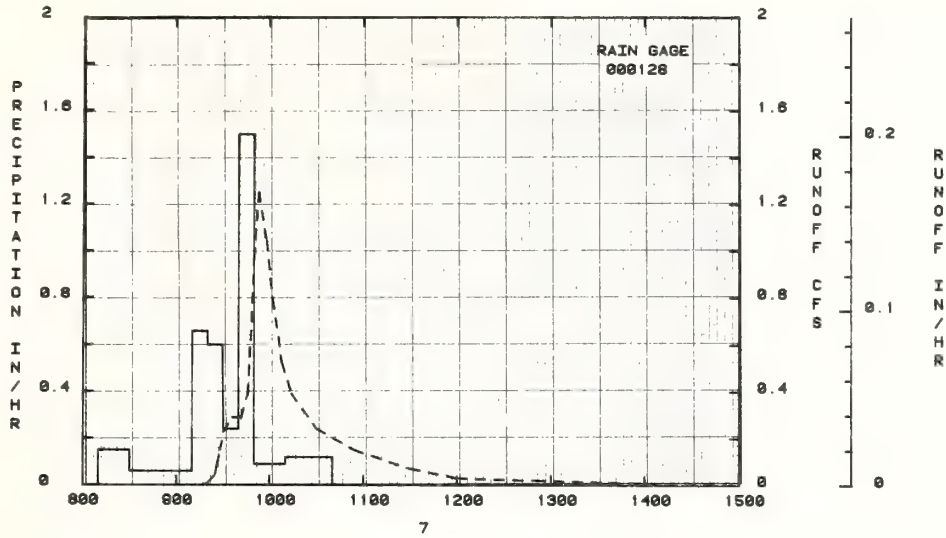
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 128. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 185												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0 T	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.371	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.033	0.0	0.0	0.0	0.0	0.0
8	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.002
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.019	0.0	0.0	0.001	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.021E	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.105	0.0	0.0	0.0	0.0	0.0
28	0.002	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
29	0.005		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.027		0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
31	0.004		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0015	0.0002	0.0	0.0	0.0	0.0008	0.0174	0.0	0.0	0.0	0.0001	0.0001
INCHES	0.153	0.022	0.0	0.0	0.0	0.078	1.736	0.0	0.0	0.004	0.012	0.011
STA AV	0.141	0.217	0.333	0.130	0.116	0.264	0.228	0.112	0.131	0.047	0.019	0.051

NOTES: To convert CFS to IN/DAY, multiply by 3.2165. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 185												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JULY 7, 1969												
RG 000128			RG 000128									
7- 7	0.0	0.0	7- 7	810	0.0	0.0	7- 7	916	0.0	0.0		
				830	0.1500	0.05		920	0.010	0.0		
				910	0.0600	0.09		925	0.050	0.0003		
				920	0.6600	0.20		926	0.090	0.0004		
				930	0.6000	0.30		928	0.150	0.0010		
WATERSHED CONDITIONS: 25-50% corn; 0-25% weeds; 45% density.				940	0.2400	0.34		930	0.230	0.0019		
				950	1.5000	0.59		936	0.290	0.0053		
				1010	0.0900	0.62		942	0.290	0.0093		
				1040	0.1200	0.68		946	0.390	0.0123		
								948	0.620	0.0144		
								950	0.970	0.0182		
								953	1.250	0.0258		
								958	1.040	0.0384		
								1002	0.790	0.0465		
								1008	0.520	0.0554		
								1014	0.390	0.0613		
								1030	0.240	0.0727		
								1054	0.150	0.0833		
								1130	0.070	0.0922		
								1200	0.030	0.0956		
								1250	0.020	0.0987		
								1350	0.010	0.1008		
								1700	0.0	0.1038		
								1830	0.0	0.1044		
								1940	0.0	0.1046		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.13401892.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 185

COSHOCTON, OHIO WATERSHED 187

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 7.20 acres

SOILS: (Revision) Coshocton-Rayne silt loam - 36 percent; Rayne silt loam - 28 percent; Clarksburg silt loam - 22 percent; Berks shaly silt loam - 11 percent; Dekalb channery sandy loam - 3 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO		WATERSHED 187	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	F	2.02	0.81	1.34	2.11	3.14	5.54	11.16	1.67	1.26	2.27	2.71	2.72	36.75			
	Q	0.123	0.089	0.0	0.005	0.009	0.174	4.578	0.036	0.0	0.006	0.011	0.004	5.035			
STA AV	P	2.70	2.20	3.32	3.24	3.85	4.07	4.51	2.80	2.76	2.13	2.44	2.23	36.24			
	Q	0.826	0.659	1.098	0.533	0.238	0.328	0.271	0.057	0.102	0.019	0.019	0.247	4.396			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days	
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7- 5	0.895	7- 5	0.612	7- 5	0.794	7- 5	1.441	7- 5	1.669	7- 5	2.105	7- 5	2.523	7- 5	3.528
MAXIMUMS FOR PERIOD OF RECORD																	
		6-12	2.750	9- 1	1.370	9- 1	1.540	9- 1	1.570	3- 4	2.010	3- 4	2.350	3- 4	2.950	7- 5	3.528
		1957		1950		1950		1950		1963		1963		1963		1969	

NOTES: Watershed conditions: From strip cropping to no plow corn. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.24-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.24-1 and 26.30-3. Precipitation data from rain gage 116. Precipitation and runoff records began Jan. 1941. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969	DAILY PRECIPITATION (inches)					COSHOCTON, OHIO				WATERSHED 187			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	1.26	0.0	
2	0.0	0.02S	0.0	0.14	0.0	0.92	0.0	0.0	0.14	1.12	0.22	0.0	
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.02	0.05E	0.0	
4	0.0	0.0	0.0	0.12	0.0	0.0	0.31	0.0	0.0	0.0	0.02E	0.0	
5	0.0	0.0	0.0	0.48	0.0	0.14	4.44	0.0	0.10	0.0	0.0	0.0	
6	0.0	0.09S	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.08	0.0	0.56	
8	0.05E	0.52	0.0	1.57	0.13	0.0	0.15	0.0	0.0	0.0	0.0	0.0	
9	0.08	0.03E	0.0	0.05E	0.25	0.0	0.0	0.89	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.07S	0.10	0.38	0.0	0.36	0.0	0.0	0.0	0.0	0.50	
11	0.0	0.0	0.07S	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	
12	0.0	0.10S	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.04	0.09E	0.03S	
14	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.06	0.09E	0.07S	
15	0.0	0.0	0.0	0.15	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.02S	
16	0.04E	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.38	0.0	0.0	0.0	0.05	0.0	0.12	0.05	0.35	0.0	0.04E	0.0	
18	0.26	0.0	0.0	0.49	0.28	0.03E	0.0	0.06	0.0	0.0	0.04E	0.0	
19	0.0	0.0	0.0	0.0	0.12	0.0	0.60	0.52	0.0	0.0	0.70S	0.0	
20	0.10	0.0	0.19	0.0	0.0	0.0	1.44	0.0	0.0	0.90	0.0	0.0	
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S	
22	0.0	0.0	0.0	0.15	0.0	0.10	0.04	0.0	0.0	0.0	0.0	0.11S	
23	0.0	0.0	0.0	0.14	0.0	1.64	0.0	0.0	0.0	0.0	0.20	0.08S	
24	0.0	0.0	0.76	0.0	0.0	0.39	0.0	0.0	0.09	0.0	0.0	0.0	
25	0.0	0.0	0.11	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.12S	
26	0.0	0.02S	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	2.55	0.0	0.02E	0.05	0.0	0.0	
28	0.31	0.0	0.06E	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.39	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S	
30	0.41	0.0	0.0	0.0	0.0	0.62	0.46	0.0	0.0	0.0	0.0	0.30S	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	
TOTAL	2.02	0.81	1.34	2.11	3.14	5.54	11.16	1.67	1.26	2.27	2.71	2.72	
STA AV	2.70	2.20	3.32	3.24	3.85	4.07	4.51	2.80	2.76	2.13	2.44	2.23	

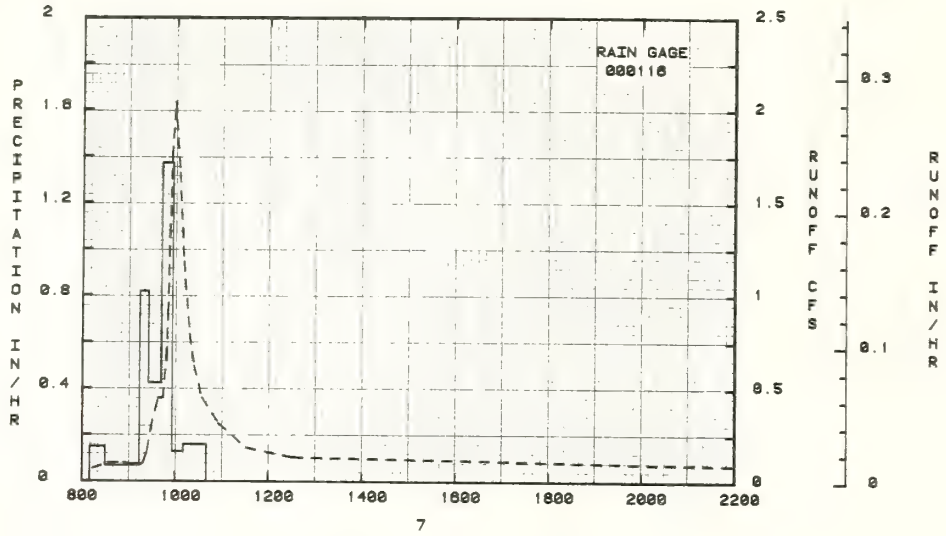
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 116. STA AV based on 29 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 187												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.009	0.0	0.0	0.0	0.0	0.0	0.007E	0.0	0.0	0.001	0.0
2	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.002E	0.0	0.001	0.001	0.0
3	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.629E	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.131	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.142	0.0	0.0	0.0	0.0	0.001
8	0.0	0.007	0.0	0.0	0.003	0.0	0.068	0.0	0.0	0.0	0.0	0.0
9	0.0	0.002	0.0	0.0	0.0	0.0	0.042	0.001	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.032	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.016	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.004	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.030	0.0	0.0	0.001	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.031	0.001	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.131	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.054	0.0	0.0	0.0	0.0	0.0
29	0.003	0.0	0.0	0.0	0.0	0.0	0.042	0.0	0.0	0.0	0.0	0.0
30	0.014	0.0	0.0	0.0	0.0	0.0	0.030	0.0	0.0	0.0	0.0	0.0
31	0.012	0.0	0.0	0.0	0.0	0.0	0.015	0.0	0.0	0.0	0.0	0.0
MEAN	0.0012	0.0010	0.0	0.0001	0.0001	0.0018	0.0447	0.0004	0.0	0.0001	0.0001	0.0
INCHES	0.123	0.089	0.0	0.005	0.009	0.174	4.578	0.036	0.0	0.006	0.011	0.004
STA AV	0.826	0.659	1.098	0.533	0.238	0.328	0.271	0.057	0.102	0.019	0.019	0.247

NOTES: To convert CFS to IN/DAY, multiply by 3.3058. STA AV based on 29 yr period.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 187											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	RG 000116		7- 7	RG 000116			7- 7	814	0.070	0.0	
	0.0	0.083		810	0.0	0.0		834	0.100	0.0038	
				830	0.1500	0.05		854	0.100	0.0082	
				914	0.0682	0.10		904	0.090	0.0103	
				925	0.8181	0.25		916	0.090	0.0127	
				942	0.4235	0.37					
				956	1.3715	0.69		920	0.110	0.0136	
				1010	0.1286	0.72		924	0.170	0.0149	
				1040	0.1600	0.80		928	0.280	0.0169	
								934	0.390	0.0215	
								938	0.450	0.0253	
								944	0.450	0.0314	
								948	0.670	0.0365	
								950	0.910	0.0403	
								952	1.330	0.0451	
								954	1.750	0.0526	
								958	2.040	0.0699	
								1004	1.660	0.0958	
								1010	1.180	0.1149	
								1018	0.790	0.1329	
								1024	0.620	0.1427	
								1034	0.450	0.1551	
								1056	0.310	0.1742	
								1132	0.180	0.1946	
								1232	0.130	0.2161	
								2400	0.090	0.3867	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.13774167.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 187

COSHOCTON, OHIO WATERSHED 192

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 7.59 acres

SOILS: (Revision) Berks shaly silt loam - 26 percent; Coshocton-Rayne silt loams - 26 percent; Clarksburg silt loam - 25 percent; Dekalb channery sandy loam - 12 percent; Rayne silt loam - 11 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.B., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)													COSHOCTON, OHIO WATERSHED 192				
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.31	0.73	1.36	1.95	3.17	5.05	10.74	1.62	1.12	2.23	2.78	2.66	35.72			
	Q	0.220	0.172	0.003	0.0	0.002	0.0	1.917	0.0	0.0	0.0	0.0	0.0	2.315			
STA AV	P	2.69	2.15	3.22	3.21	3.75	3.87	4.29	2.82	2.57	2.05	2.38	2.21	35.20			
	Q	0.442	0.519	0.624	0.234	0.159	0.289	0.214	0.066	0.103	0.018	0.038	0.168	2.873			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
Maximum Discharge Date Rate 1 Hour Date Vol. 2 Hours Date Vol. Maximum Volume for Selected Time Interval 6 Hours Date Vol. 12 Hours Date Vol. 1 Day Date Vol. 2 Days Date Vol. 8 Days Date Vol.																	
1969	7-27 0.812		7- 5 0.318		7- 5 0.433		7- 5 0.839		7- 5 0.994		7- 5 1.154		7- 5 1.211		7- 2 1.425		
MAXIMUMS FOR PERIOD OF RECORD																	
6-16 1946		4.600 1946		6-16 1950		1.850 1950		9- 1 1950		2.020 1950		2-040 1963		3- 4 1963		2.110 1963	
		2.530 1963		3- 4 1963		3.850 1963		3- 3 1963		4.720 1963							

NOTES: Watershed conditions: Cover of second year meadow, prevailing practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.23-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.25-1 and 26.30-3. Precipitation data from rain gage 128. Precipitation and runoff records began Sept. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 192	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.41	0.0		
2	0.0	0.02S	0.0	0.15	0.0	0.80	0.0	0.0	0.11	1.22	0.23	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.04E	0.0		
4	0.0	0.0	0.0	0.15	0.0	0.0	0.30	0.0	0.0	0.0	0.03E	0.0		
5	0.0	0.0	0.0	0.45	0.0	0.10	4.45	0.0	0.10	0.0	0.0	0.0		
6	0.0	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.0	0.0	0.09	0.0	0.64		
8	0.05E	0.50	0.0	0.0	1.65	0.12	0.0	0.10	0.0	0.0	0.0	0.0		
9	0.15	0.03E	0.0	0.05E	0.24	0.0	0.0	0.92	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.10	0.42	0.0	0.38	0.0	0.0	0.0	0.0	0.35		
11	0.0	0.0	0.04S	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.11E		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.04	0.06E	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.05	0.07E	0.07S		
15	0.0	0.0	0.0	0.13	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.05E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.40	0.0	0.0	0.0	0.03	0.0	0.12	0.07	0.30	0.0	0.04E	0.0		
18	0.33	0.0	0.0	0.50	0.35	0.05E	0.0	0.0	0.0	0.0	0.04E	0.0		
19	0.0	0.0	0.0	0.0	0.07	0.0	0.70	0.53	0.0	0.0	0.66S	0.0		
20	0.10	0.0	0.19	0.0	0.0	0.0	1.44	0.0	0.0	0.80	0.0	0.0		
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.10	0.0	0.10	0.03	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.09	0.0	1.61	0.0	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	0.86	0.0	0.0	0.40	0.0	0.0	0.08	0.0	0.0	0.0		
25	0.0	0.0	0.14	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.31	0.0	0.0	0.03	0.0	0.0		
28	0.32	0.0	0.04E	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.47	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.44	0.0	0.0	0.0	0.0	0.50	0.31	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.31	0.73	1.36	1.95	3.17	5.05	10.74	1.62	1.12	2.23	2.78	2.66		
STA AV	2.69	2.15	3.22	3.21	3.75	3.87	4.29	2.82	2.57	2.05	2.38	2.21		

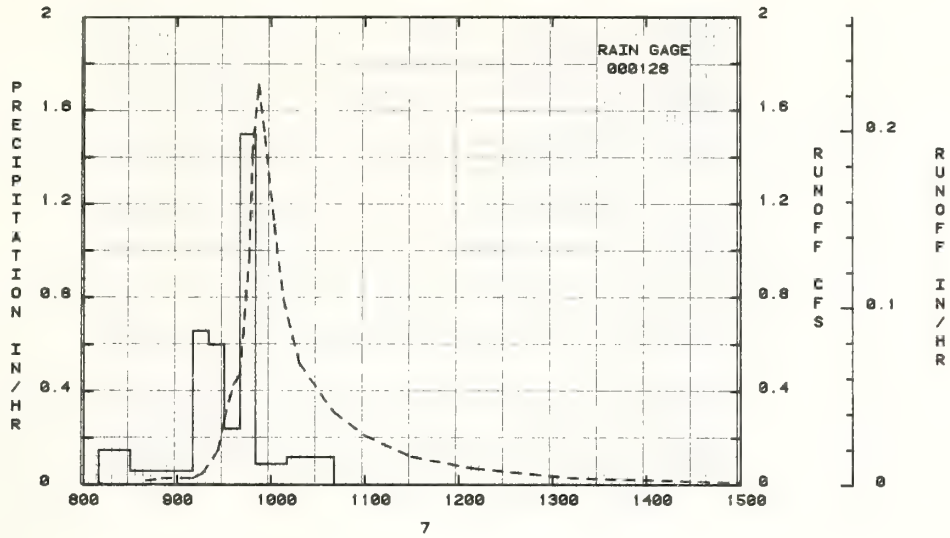
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 128. STA AV based on 31 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 192												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.049	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.365	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.021	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.060	0.0	0.0	0.0	0.0	0.0
8	0.0	0.006	0.0	0.0	0.001	0.0	0.002	0.0	0.0	0.0	0.0	0.0
9	0.0	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.046	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.110	0.0	0.0	0.0	0.0	0.0
28	0.002	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
29	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.041	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0023	0.0028	0.0	0.0	0.0	0.0	0.0197	0.0	0.0	0.0	0.0	0.0
INCHES	0.220	0.172	0.003	0.0	0.002	0.0	1.917	0.0	0.0	0.0	0.0	0.0
STA AV	0.442	0.519	0.624	0.234	0.159	0.289	0.214	0.066	0.103	0.018	0.038	0.168

NOTES: To convert CFS to IN/DAY, multiply by 3.1359. STA AV based on 31 yr period, part-year records included.

1969 SELECTED RUNOFF EVENT			COSHOCTON, OHIO WATERSHED 192								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	RG 000128		7- 7	RG 000128			7- 7				
	0.0	0.008		810	0.0	0.0		840	0.020	0.0	
				830	0.1500	0.05		850	0.030	0.0005	
				910	0.0600	0.09		910	0.030	0.0017	
				920	0.6600	0.20		916	0.050	0.0022	
				930	0.6000	0.30		926	0.150	0.0044	
WATERSHED CONDITIONS:				940	0.2400	0.34		930	0.280	0.0064	
75-100%, 4" legumes and grass;				950	1.5000	0.59		936	0.430	0.0109	
0-25%, 4" weeds; 75% density.				1010	0.0900	0.62		940	0.470	0.0148	
			1040	0.1200	0.68		944	0.790	0.0203		
							946	0.970	0.0243		
							948	1.410	0.0292		
							952	1.710	0.0427		
							956	1.490	0.0566		
							1002	1.110	0.0739		
							1008	0.790	0.0865		
							1018	0.520	0.1005		
							1040	0.310	0.1205		
							1100	0.210	0.1320		
							1130	0.120	0.1427		
							1210	0.070	0.1507		
							1310	0.030	0.1573		
							1800	0.010	0.1715		
							2400	0.010	0.1786		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.13066403.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 192

COSHOCTON, OHIO WATERSHED 169

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 29.00 acres

SOILS: (Revision) Clarksburg silt loam - 33 percent; Berks shaly silt loam - 24 percent; Coshocton silt loam - 23 percent; Bayne silt loam - 16 percent; Dekalb channery sandy loam - 3 percent; Keene silt loam - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J. L.

MONTHLY PRECIPITATION AND RUNOFF (inches)										COSHOCTON, OHIO		WATERSHED 169							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	2.16	0.60	1.25	2.02	3.09	5.24	10.64	1.66	1.27	2.23	2.73	2.54	35.43					
	Q	0.756	0.462	0.080	0.198	0.189	0.144	3.327	0.282	0.001	0.017	0.086	0.109	5.651					
STA AV	P	2.64	2.11	3.17	3.16	3.77	3.99	4.42	2.83	2.65	2.00	2.43	2.18	35.36					
	Q	0.858	0.928	1.379	0.909	0.519	0.463	0.349	0.159	0.149	0.038	0.088	0.357	6.196					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
	Maximum Discharge Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	6 Hours Date	Vol.	Maximum Volume for Selected Time Interval			12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.
1969	7-27	1.183	7- 5	0.483	7- 5	0.562	7- 5	1.144	7- 5	1.347	7- 5	1.438	7- 5	1.496	7- 5	1.910			
MAXIMUMS FOR PERIOD OF RECORD																			
	6-12 1957	2.590	9- 1 1950	1.700	9- 1 1950	2.000	9- 1 1950	2.030	9- 1 1950	2.040	1-21 1959	2.120	1-21 1959	2.370	1-20 1959	2.680			

NOTES: Watershed conditions: Cover of 6% hardwoods, 6% reforested, 48% grassland, 34% cultivated, 6% miscellaneous, contour strip cropped. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.27-6. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.27-1 and 26.30-3. Precipitation data from rain gage 113. Precipitation and runoff records began Jan. 1940. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 169	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	1.30	0.0			
2	0.0	0.02M	0.0	0.14	0.0	0.39	0.0	0.0	0.11	1.19	0.25	0.0			
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.05	0.0			
4	0.0	0.0	0.0	0.11	0.0	0.0	0.33	0.0	0.0	0.0	0.03E	0.0			
5	0.0	0.0	0.0	0.46	0.0	0.11	4.45	0.0	0.18	0.0	0.0	0.0			
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.0			
7	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.10	0.0	0.56			
8	0.05E	0.45	0.0	0.0	1.65	0.12	0.0	0.15E	0.0	0.0	0.0	0.0			
9	0.10	0.0	0.0	0.05E	0.22	0.0	0.0	0.87	0.0	0.0	0.0	0.0			
10	0.0	0.0	0.04S	0.10	0.38	0.0	0.39	0.0	0.0	0.0	0.0	0.35			
11	0.0	0.0	0.05S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.09M			
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0			
13	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.06	0.10M	0.02S			
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.10E	0.11M	0.04S			
15	0.0	0.0	0.0	0.16	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.03S			
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
17	0.34	0.0	0.0	0.0	0.0	0.0	0.11	0.06E	0.31	0.0	0.02E	0.0			
18	0.31	0.0	0.0	0.50	0.36	0.03E	0.0	0.0	0.0	0.0	0.03E	0.01S			
19	0.0	0.0	0.0	0.0	0.03E	0.0	0.70	0.58	0.0	0.0	0.64S	0.0			
20	0.10	0.0	0.16	0.0	0.0	0.0	1.49	0.0	0.0	0.75	0.0	0.0			
21	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S			
22	0.0	0.0	0.0	0.15	0.0	0.10	0.04	0.0	0.0	0.0	0.0	0.11S			
23	0.0	0.0	0.0	0.10	0.0	1.62	0.0	0.0	0.0	0.0	0.20	0.08E			
24	0.0	0.0	0.79	0.0	0.0	0.37	0.0	0.0	0.10	0.0	0.0	0.0			
25	0.0	0.0	0.11	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.12S			
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
27	0.0	0.0	0.0	0.0	0.0	0.0	2.18	0.0	0.02E	0.03E	0.0	0.0			
28	0.31	0.0	0.05M	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29	0.45	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S			
30	0.45	0.0	0.0	0.0	0.0	0.53	0.25	0.0	0.0	0.0	0.0	0.30S			
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S			
TOTAL	2.16	0.60	1.25	2.02	3.09	5.24	10.64	1.66	1.27	2.23	2.73	2.54			
STA AV	2.64	2.11	3.17	3.16	3.77	3.99	4.42	2.83	2.65	2.00	2.43	2.18			

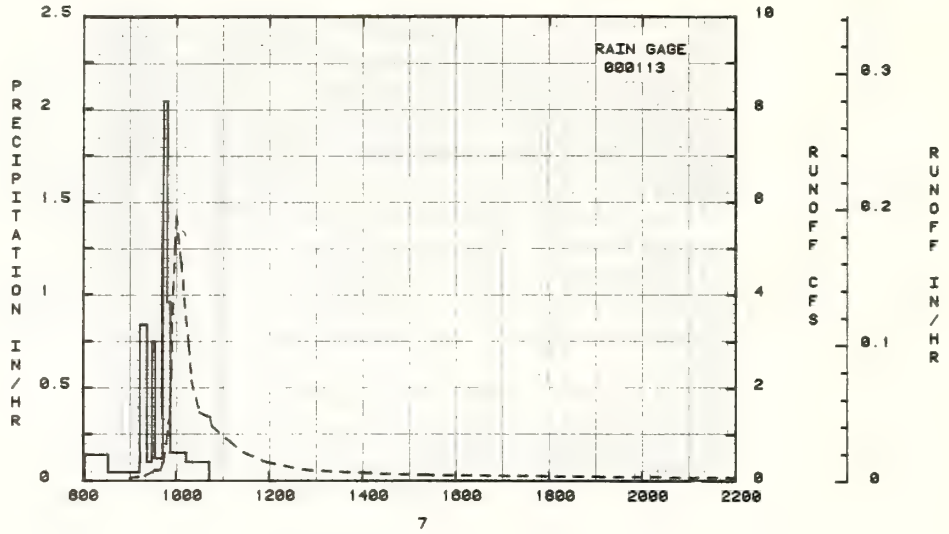
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 113. STA AV based on 30 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO WATERSHED 169						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.010E	0.069	0.003	0.005	0.026	0.0 T	0.0 T	0.034	0.0	0.0	0.038E	0.0
2	0.008E	0.060	0.003	0.006	0.0	0.034	0.0	0.030	0.0	0.012	0.033	0.0
3	0.006E	0.042	0.002	0.006	0.0	0.001	0.0	0.026	0.0	0.0	0.0 T	0.0
4	0.006E	0.023	0.002	0.007	0.0	0.0	0.0	0.025	0.0	0.0	0.0	0.0
5	0.005E	0.023	0.002	0.039	0.0	0.0	1.747	0.023	0.0	0.0	0.0	0.0
6	0.004E	0.021	0.002	0.013	0.0	0.0	0.079	0.018	0.002	0.0	0.0	0.0
7	0.004E	0.019	0.002	0.010	0.0	0.0	0.235	0.015	0.0	0.0	0.0	0.020
8	0.003E	0.069	0.001	0.008	0.096	0.0	0.065	0.017	0.0	0.0	0.0	0.004
9	0.003E	0.049	0.0	0.007	0.017	0.0	0.049	0.067	0.0	0.0	0.0	0.001
10	0.002E	0.023	0.0	0.012	0.036	0.0	0.084	0.020	0.0	0.0	0.0	0.018
11	0.002E	0.019	0.0	0.010	0.013	0.0	0.047	0.010	0.0	0.0	0.0	0.023
12	0.001E	0.016	0.0	0.010	0.005	0.003	0.032	0.005	0.0	0.0	0.0	0.009
13	0.001E	0.013	0.0	0.010	0.003	0.007	0.021	0.004	0.0	0.0	0.0	0.005
14	0.001	0.012	0.0	0.008	0.003	0.0 T	0.016	0.004	0.0	0.0	0.0	0.003
15	0.001	0.012	0.0	0.007	0.002	0.004E	0.014	0.004	0.0	0.0	0.0	0.002
16	0.001	0.011	0.0	0.006	0.002	0.0	0.010	0.003	0.0	0.0	0.0	0.002
17	0.029	0.010	0.001	0.006	0.002	0.0	0.011	0.003	0.0	0.0	0.0	0.002
18	0.122E	0.008	0.001	0.020	0.009	0.0	0.008	0.003	0.0	0.0	0.0	0.002
19	0.042	0.007	0.001	0.009	0.002	0.0	0.042	0.024	0.0	0.0	0.028	0.002
20	0.028	0.007	0.001	0.006	0.002	0.0	0.337	0.003	0.0	0.008	0.001	0.002
21	0.028	0.007	0.0 T	0.005	0.002	0.0	0.044	0.002	0.0	0.0 T	0.0	0.002
22	0.028E	0.006	0.0	0.006	0.001	0.0	0.037	0.001	0.0	0.0	0.0	0.002
23	0.028E	0.006	0.0	0.007	0.0 T	0.103	0.032	0.0 T	0.0	0.0	0.003	0.002
24	0.028E	0.006	0.022	0.004	0.0	0.012	0.026	0.0	0.0	0.0	0.001	0.002
25	0.024E	0.006	0.023	0.003	0.004	0.001	0.023	0.0	0.0	0.0	0.0 E	0.002
26	0.018E	0.006	0.009	0.002	0.001E	0.0	0.021	0.0	0.0	0.0	0.0	0.001
27	0.012E	0.005	0.005	0.002	0.0	0.0	0.846	0.0	0.0	0.0	0.0	0.001
28	0.017	0.004	0.004	0.003	0.0	0.0	0.071	0.0	0.0	0.0	0.0	0.001
29	0.113		0.004	0.001	0.0	0.0	0.056	0.0	0.0	0.0	0.0	0.002
30	0.250		0.004	0.001	0.0	0.010	0.057	0.0	0.0	0.0	0.0	0.005
31	0.093		0.004		0.0		0.041	0.0		0.0		0.017
MEAN	0.0297	0.0201	0.0031	0.0080	0.0074	0.0058	0.1308	0.0111	0.0001	0.0006	0.0035	0.0043
INCHES	0.756	0.462	0.080	0.198	0.189	0.144	3.327	0.282	0.001	0.017	0.086	0.109
STA AV	0.858	0.928	1.379	0.909	0.519	0.463	0.349	0.159	0.149	0.038	0.088	0.357

NOTES: To convert CFS to IN/DAY, multiply by 0.8208. STA AV based on 30 yr period.

1969	SELECTED RUNOFF EVENT					COSHOCTON, OHIO WATERSHED 169						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JULY 7, 1969												
RG 000113												
7- 7	0.0	0.016	7- 7	803	0.0	0.0	7- 7	900	0.060	0.0		
				833	0.1400	0.07		920	0.110	0.0010		
				913	0.0450	0.10		932	0.229	0.0021		
				923	0.8400	0.24		940	0.240	0.0032		
				929	0.0999	0.25		944	0.400	0.0039		
WATERSHED CONDITIONS:												
Cover of 6%, hardwoods; 6%;												
reforested; 48%, grassland;												
34%, cultivated; 6% miscel-												
laneous; watershed contour												
strip cropped; no-till corn.												
				933	0.7500	0.30		948	0.860	0.0053		
				943	0.1200	0.32		950	1.240	0.0066		
				948	2.0400	0.49		952	1.360	0.0080		
				953	0.9600	0.57		954	2.390	0.0103		
				1013	0.1500	0.62		955	3.620	0.0119		
				1043	0.1000	0.67		956	4.070	0.0140		
								958	5.030	0.0195		
								1000	5.700	0.0260		
								1006	4.700	0.0434		
								1010	3.920	0.0532		
								1016	2.920	0.0651		
								1020	2.150	0.0709		
								1030	1.470	0.0813		
								1044	1.360	0.0925		
								1046	1.170	0.0940		
								1108	0.860	0.1067		
								1128	0.600	0.1150		
								1156	0.400	0.1230		
								1244	0.240	0.1318		
								1400	0.170	0.1409		
								1520	0.130	0.1478		
								1900	0.100	0.1622		
								2200	0.080	0.1715		
								2400	0.080	0.1769		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.03419793.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 169

COSHOCTON, OHIO WATERSHED 177

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 75.60 acres

SOILS: (Revision) Coshocton-Bayne silt loam - 38 percent; Berks shaly silt loam - 21 percent; Bayne silt loam - 16 percent; Dekalb channery sandy loam - 15 percent; Keene silt loam - 6 percent; Orrville silt loam - 4 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)										COSHOCTON, OHIO WATERSHED 177					
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64	36.55	
	Q	0.789	0.815	0.201	0.447	0.158	0.179	4.911	0.302	0.030	0.028	0.164	0.232	8.256	
STA AV	P	2.71	2.21	3.33	3.23	3.81	3.93	4.37	2.82	2.58	2.03	2.49	2.24	35.75	
	Q	1.094	1.141	1.758	1.148	0.634	0.532	0.402	0.122	0.123	0.057	0.147	0.525	7.682	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-27	0.966	7- 5	0.549	7- 5	0.862	7- 5	1.512	7- 5	1.752	7- 5	1.935	7- 5	3.033
MAXIMUMS FOR PERIOD OF RECORD															
		6-12	3.140	6-12	1.330	9- 1	1.550	9- 1	1.630	3- 4	1.770	3- 4	2.060	3- 4	3.220
		1957		1957		1950		1950		1963		1963		1963	

NOTES: Watershed conditions: Cover of 8% hardwoods, 6% reforested, 67% grassland, 17% cultivated, 6% miscellaneous, contour strip cropped. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 985, p. 26.28-7. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.28-1 and 26.30-3. Precipitation data from rain gage 103. Precipitation and runoff records began Jan. 1940. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 177	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.78	0.0		
2	0.0	0.03S	0.0	0.15	0.0	1.00	0.0	0.0	0.14	1.25	0.79	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.05	0.0		
4	0.0	0.0	0.0	0.11	0.0	0.0	2.50	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.58	0.0	0.13	2.50	0.0	0.25	0.0	0.0	0.0		
6	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.0	0.0	0.10	0.0	0.58		
8	0.05E	0.51	0.0	0.0	1.15	0.18	0.0	0.17	0.0	0.0	0.0	0.0		
9	0.08	0.03M	0.0	0.05E	0.25	0.0	0.0	0.87	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.05S	0.09	0.42	0.0	0.46	0.0	0.0	0.0	0.0	0.38		
11	0.0	0.0	0.05S	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.12M		
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.10M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10M	0.07S		
15	0.0	0.0	0.0	0.19	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.42	0.0	0.0	0.0	0.05	0.0	0.07E	0.04E	0.32	0.0	0.04E	0.0		
18	0.36	0.0	0.0	0.50	0.37	0.05	0.0	0.0	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.73	0.0	0.0	0.67S	0.0		
20	0.10	0.0	0.20	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0		
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.20	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.45	0.0	0.0	0.0	0.0	0.19	0.08S		
24	0.0	0.0	0.88	0.0	0.0	0.40	0.0	0.0	0.11	0.0	0.0	0.0		
25	0.0	0.0	0.17	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.33	0.0	0.02E	0.02E	0.0	0.0		
28	0.27	0.0	0.05M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.48	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.58	0.0	0.0	0.0	0.0	0.30	0.26	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.36	0.72	1.48	2.26	2.73	4.98	11.11	1.81	1.48	2.17	2.81	2.64		
STA AV	2.71	2.21	3.33	3.23	3.81	3.93	4.37	2.82	2.58	2.03	2.49	2.24		

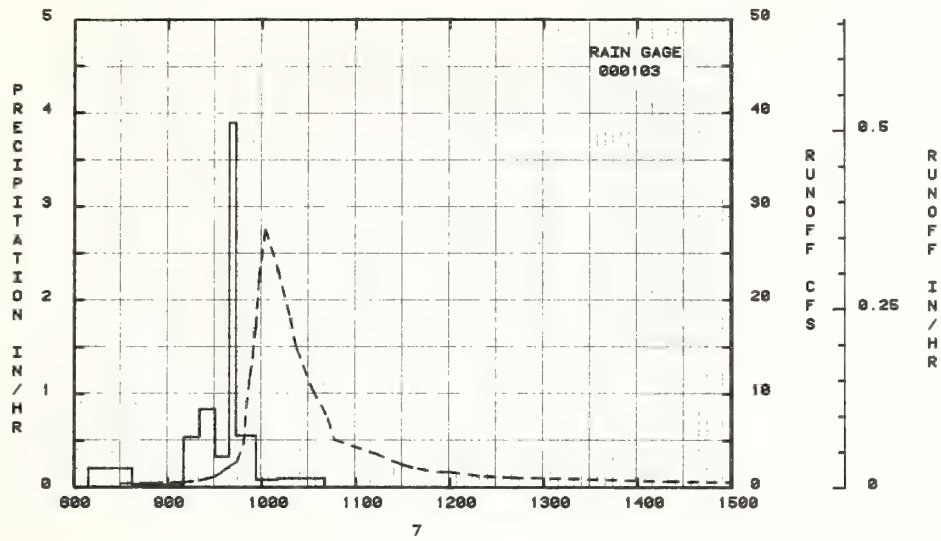
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 103. STA AV based on 30 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 177												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.093E	0.340	0.009	0.039	0.007	0.004	0.009	0.124	0.001	0.061	0.088	0.004
2	0.070E	0.284	0.008	0.055	0.005	0.083	0.005	0.093	0.001	0.003E	0.081	0.004
3	0.033E	0.214	0.008	0.041	0.003	0.013	0.004	0.069	0.001	0.0	0.011	0.003
4	0.015E	0.147	0.007	0.038	0.002	0.008	0.003	0.047	0.001	0.0	0.010	0.001
5	0.007E	0.132	0.006	0.143	0.002	0.006	6.109	0.039	0.013	0.0	0.010	0.0
6	0.003E	0.119	0.006	0.094	0.001	0.006	0.583	0.032	0.063	0.0	0.009	0.0
7	0.001	0.094	0.006	0.086	0.001	0.006	1.314	0.024	0.005	0.0	0.008	0.053
8	0.001	0.174	0.006	0.086	0.109	0.006	0.461	0.043	0.004	0.0	0.007	0.022
9	0.004	0.163	0.006	0.086	0.044	0.005	0.332	0.159	0.003	0.0	0.006	0.013
10	0.002	0.104	0.006	0.086	0.084	0.003	0.444	0.048	0.001	0.0	0.005	0.052
11	0.001	0.114	0.007	0.061	0.060	0.002	0.242	0.026	0.001	0.0	0.003	0.088
12	0.001	0.109	0.008	0.049	0.029	0.009	0.204	0.022	0.0	0.0	0.002	0.061
13	0.0	0.086	0.006	0.041	0.024	0.020	0.140	0.024	0.0	0.0	0.002	0.052
14	0.0	0.059	0.004	0.036	0.017	0.005	0.089	0.022	0.0	0.0	0.003	0.041
15	0.0	0.047	0.003	0.051	0.009	0.010	0.068	0.018	0.0	0.0	0.004	0.036
16	0.0	0.047	0.002	0.037	0.008	0.006	0.052	0.014	0.0	0.0	0.003	0.030
17	0.129	0.041	0.005	0.032	0.006	0.004	0.044	0.011	0.0	0.0	0.002	0.022
18	0.380	0.036	0.006	0.070	0.022E	0.004	0.039	0.008	0.0	0.0	0.003	0.020
19	0.045	0.036	0.004	0.047	0.018	0.004	0.069	0.078	0.0	0.0	0.104	0.018
20	0.036	0.036	0.012	0.032	0.006	0.003	0.676	0.015	0.0	0.024	0.024	0.016
21	0.044E	0.034	0.010	0.028	0.003	0.002	0.137	0.008	0.0	0.0	0.022	0.016
22	0.034E	0.032	0.006	0.033	0.002	0.003	0.146	0.008	0.0	0.0	0.020	0.014
23	0.028E	0.030	0.004	0.031	0.002	0.224	0.132	0.007	0.0	0.0	0.029	0.013
24	0.020E	0.028	0.075	0.025	0.001	0.058	0.107	0.005	0.0	0.0	0.018	0.013
25	0.014E	0.028	0.115	0.018	0.013	0.024	0.075	0.003	0.0	0.0	0.011	0.013
26	0.013E	0.024	0.075	0.014	0.006	0.013	0.058	0.002	0.0	0.0	0.009	0.013
27	0.013E	0.016	0.059	0.011	0.005	0.011	2.886	0.002	0.0	0.0	0.008	0.013
28	0.052E	0.011	0.055	0.019	0.005	0.009	0.408	0.002	0.0	0.0	0.007	0.013
29	0.252		0.044	0.014	0.004	0.007	0.314	0.001	0.0	0.0	0.006	0.013
30	0.759		0.036	0.010	0.003	0.009	0.257	0.001	0.0	0.0	0.005	0.027
31	0.420		0.036		0.002		0.188	0.001		0.0		0.051
MEAN	0.0798	0.0925	0.0206	0.0473	0.0162	0.0190	0.5032	0.0309	0.0032	0.0028	0.0173	0.0237
INCHES	0.789	0.815	0.201	0.447	0.158	0.179	4.911	0.302	0.030	0.028	0.164	0.232
STA AV	1.094	1.141	1.758	1.148	0.634	0.532	0.402	0.122	0.123	0.057	0.147	0.525

NOTES: To convert CFS to IN/DAY, multiply by 0.3148. STA AV based on 30 yr period.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 177		
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JUL 7, 1969											
RG 000103			RG 000103								
7- 7	0.0	0.046	7- 7	809	0.0	0.0	7- 7	830	0.490	0.0	
				837	0.2143	0.10		850	0.540	0.0022	
				910	0.0364	0.12		910	0.630	0.0047	
				920	0.5400	0.21		920	0.800	0.0063	
				930	0.8400	0.35		926	1.010	0.0075	
WATERSHED CONDITIONS:				939	0.3334	0.40		930	1.270	0.0086	
Cover of 14%, hardwoods; 6%,				943	3.9001	0.66		934	1.660	0.0099	
reforested; 67%, grassland;				956	0.5538	0.78		936	1.920	0.0106	
17%, cultivated; 6%, miscel-				1010	0.0857	0.80		940	2.420	0.0125	
laneous; watershed contour				1040	0.1000	0.85		944	2.810	0.0148	
strip cropped.											
								948	4.620	0.0180	
								950	8.550	0.0210	
								952	11.900	0.0252	
								954	14.100	0.0312	
								956	17.200	0.0376	
								958	22.400	0.0467	
								1002	27.500	0.0684	
								1010	23.300	0.1127	
								1018	18.000	0.1487	
								1022	14.800	0.1630	
								1032	10.500	0.1909	
								1042	7.340	0.2106	
								1046	5.130	0.2160	
								1112	3.650	0.2410	
								1124	2.810	0.2494	
								1130	2.420	0.2529	
								1140	2.010	0.2577	
								1152	1.660	0.2625	
								1200	1.660	0.2655	
								1222	1.200	0.2723	
								1240	1.070	0.2768	
								1420	0.670	0.2959	
								1900	0.540	0.3330	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01311825.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 177

COSHOCTON, OHIO WATERSHED 196

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 303.00 acres

SOILS: (Revision) Coshocton-Bayne silt loam - 28 percent; Bayne silt loam - 14 percent; Bayne-Dekalb complex - 11 percent; Coshocton silt loam - 9 percent; Keene silt loam - 9 percent; Dekalb channelly sandy loam - 7 percent; Berks shaly silt loam - 6 percent; Glenford silt loam - 5 percent; Clarksburg silt loam - 4 percent; Dekalb extremely stony sandy loam - 3 percent; stony colluvial land, Dekalb soil materials - 3 percent; Chagrin silt loam - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.E., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO		WATERSHED 196			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	2.18	0.77	1.35	2.11	3.30	5.43	11.09	1.67	1.31	2.22	2.79	2.72	36.96					
	Q	1.272	0.963	0.459	0.833	0.848	0.440	6.493	0.469	0.106	0.140	0.435	0.450	12.908					
STA AV	P	2.71	2.38	3.52	3.38	3.80	4.31	4.47	2.80	2.62	2.18	2.49	2.30	36.96					
	Q	1.746	1.891	2.867	2.301	1.496	1.058	0.743	0.290	0.231	0.204	0.394	0.946	14.166					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		2 Days		8 Days			
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.		
1969		7- 5	1.015	7- 5	0.669	7- 5	1.053	7- 5	2.106	7- 5	2.453	7- 5	2.755	7- 5	3.009	7- 5	4.050		
MAXIMUMS FOR PERIOD OF RECORD																			
		6-12	3.720	6-12	1.310	6-12	1.440	7- 5	2.106	7- 5	2.453	1-21	2.920	1-20	3.210	3- 4	4.630		
		1957		1957		1957		1969		1969		1959		1959		1964			

NOTES: Watershed conditions: Cover of 27% woodland, 50% grassland, 19% cultivated, 4% miscellaneous, prevailing practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.30-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.30-1 and 26.30-3. Precipitation data from rain gages 108 and 116. Precipitation and runoff records began May 1937. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 196													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0	1.33	0.0														
2	0.0	0.02M	0.0	0.15	0.0	0.88	0.0	0.0	0.13	1.14	0.24	0.0															
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.04E	0.0	0.04	0.03	0.05E	0.0															
4	0.0	0.0	0.0	0.13	0.0	0.0	0.33	0.0	0.0	0.0	0.03E	0.0															
5	0.0	0.0	0.0	0.51	0.0	0.13	4.54	0.0	0.10	0.0	0.0	0.0															
6	0.01S	0.09S	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0															
7	0.02S	0.0	0.0	0.0	0.0	0.0	0.77	0.0	0.0	0.08	0.0	0.59															
8	0.05E	0.51	0.0	0.0	1.63	0.13	0.0	0.17	0.0	0.0	0.0	0.0															
9	0.09	0.02M	0.0	0.05E	0.24	0.0	0.0	0.88	0.0	0.0	0.0	0.0															
10	0.0	0.0	0.05S	0.11	0.40	0.0	0.38	0.0	0.0	0.0	0.0	0.45															
11	0.0	0.0	0.06S	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.12M															
12	0.0	0.07S	0.0	0.0	0.0	0.53	0.0	0.0	0.0	0.0	0.0	0.0															
13	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.04	0.10M	0.03S															
14	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.05	0.10M	0.07S															
15	0.0	0.0	0.0	0.15	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.02S															
16	0.04E	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
17	0.39	0.0	0.0	0.0	0.05E	0.0	0.08E	0.04	0.34	0.0	0.03E	0.0															
18	0.31	0.0	0.0	0.44	0.30	0.04E	0.0	0.03	0.0	0.0	0.04E	0.0															
19	0.0	0.0	0.0	0.0	0.15	0.0	0.55	0.54	0.0	0.0	0.68S	0.0															
20	0.10	0.0	0.19	0.0	0.0	0.0	1.43	0.0	0.0	0.82	0.0	0.0															
21	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S															
22	0.0	0.0	0.0	0.15	0.0	0.10	0.05	0.0	0.0	0.0	0.0	0.11S															
23	0.0	0.0	0.0	0.11	0.0	1.68	0.0	0.0	0.0	0.0	0.20	0.08S															
24	0.0	0.0	0.80	0.0	0.0	0.39	0.0	0.0	0.08	0.0	0.0	0.0															
25	0.0	0.0	0.13	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.12S															
26	0.0	0.02S	0.01S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
27	0.0	0.0	0.0	0.0	0.0	0.0	2.51	0.0	0.02E	0.04	0.0	0.0															
28	0.31	0.0	0.05M	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
29	0.42	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S															
30	0.44	0.0	0.0	0.0	0.0	0.53	0.39	0.0	0.0	0.0	0.0	0.30S															
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S															
TOTAL	2.18	0.77	1.35	2.11	3.30	5.43	11.09	1.67	1.31	2.22	2.79	2.72															
STA AV	2.71	2.38	3.52	3.38	3.80	4.31	4.47	2.80	2.62	2.18	2.49	2.30															

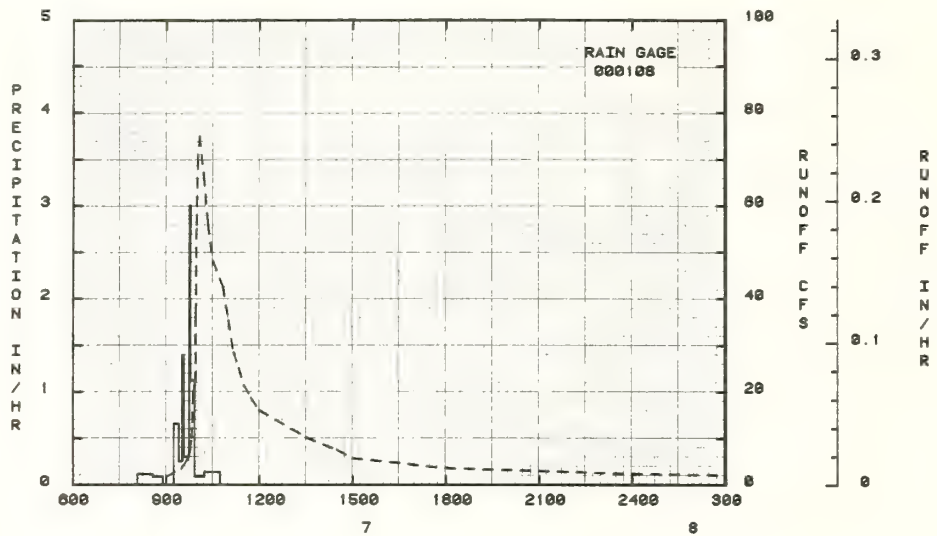
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gages 108 and 116. STA AV based on 33 yr period, part-year records included.

1969	MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO WATERSHED 196						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.318	1.380	0.143	0.261	0.176	0.095	0.146	0.650	0.042	0.029	0.636	0.068
2	0.308	1.080	0.138	0.326	0.164	0.379	0.070	0.491	0.051	0.289	1.362	0.064
3	0.254	0.840	0.133	0.253	0.158	0.157	0.068	0.418	0.052	0.088	0.111	0.066
4	0.196	0.644	0.123E	0.237	0.153	0.100	0.065	0.368	0.046	0.044	0.078	0.058
5	0.170	0.516	0.118	0.893	0.143	0.100	34.706	0.284	0.044E	0.037	0.068	0.052
6	0.158	0.429	0.118	0.744	0.117	0.085	3.631	0.239	0.122E	0.036	0.066	0.054
7	0.153	0.429	0.110	0.548	0.105	0.073	6.884E	0.199	0.048	0.041	0.064	0.333
8	0.143	0.763	0.106	0.476	1.892	0.077	1.899	0.238	0.039	0.037	0.062	0.234
9	0.128	1.203	0.110	0.446	1.118	0.075	1.371	0.661	0.036	0.033	0.060E	0.133
10	0.100	0.596	0.102E	0.478	1.059	0.060	1.732	0.350	0.034	0.033	0.056E	0.232
11	0.082	0.524	0.085	0.394	1.031	0.067	0.908	0.189	0.033	0.031	0.050	0.612
12	0.079	0.454	0.079	0.329	0.652	0.139	0.706	0.153	0.031	0.033	0.044	0.372
13	0.076	0.362	0.079	0.289	0.509	0.181	0.547	0.133	0.033E	0.034	0.052	0.318
14	0.076	0.289	0.071	0.270	0.406	0.086	0.447	0.110	0.036E	0.033	0.060	0.299
15	0.073	0.261	0.064	0.328	0.339	0.138	0.379	0.102	0.036E	0.033	0.054	0.261
16	0.073	0.243	0.060	0.270	0.280	0.086	0.338	0.102	0.036	0.034	0.050	0.219
17	0.210	0.234	0.067	0.234	0.234	0.062	0.324	0.102	0.086	0.033	0.050	0.183
18	1.739	0.226	0.082	0.444	0.334	0.064	0.273	0.095	0.082	0.031	0.052	0.170
19	0.496	0.210	0.088	0.455	0.322	0.071	0.468	0.320	0.067	0.033	1.335	0.164
20	0.358	0.184	0.104	0.307	0.225	0.062	4.202	0.125	0.054	0.354	0.261	0.153
21	0.406	0.170	0.108	0.278	0.170	0.050	1.025	0.087	0.046	0.110	0.103	0.148
22	0.406	0.189	0.082	0.326	0.158	0.051	0.780	0.075	0.039	0.046	0.095	0.143
23	0.499	0.196	0.076	0.345	0.148	2.020	0.608	0.071	0.034	0.037	0.127	0.133
24	0.499	0.189	0.472	0.309	0.128	0.382	0.470	0.066	0.038	0.036	0.140	0.115
25	0.308	0.176	0.967	0.261	0.194	0.328	0.377	0.064	0.034	0.034	0.102	0.110
26	0.203E	0.164	0.556	0.234	0.141	0.169	0.299	0.056	0.031	0.034	0.088	0.114
27	0.196E	0.153	0.406	0.218	0.110	0.124	13.475E	0.048	0.031	0.036	0.082	0.102
28	0.298	0.148	0.348	0.242	0.095	0.097	3.126E	0.046	0.031	0.033	0.079	0.095
29	1.323	0.327	0.218	0.085	0.081	1.210	0.046	0.029	0.029	0.030	0.073	0.117
30	4.656	0.280E	0.196	0.076	0.138	1.277	0.044	0.028	0.028	0.030	0.071	0.172
31	2.200	0.242	0.071	0.071	0.071	0.854	0.042	0.030	0.030	0.030	0.030	0.429
MEAN	0.5222	0.4377	0.1886	0.3537	0.3482	0.1866	2.6665	0.1927	0.0451	0.0574	0.1845	0.1847
INCHES	1.272	0.963	0.459	0.833	0.848	0.440	6.493	0.469	0.106	0.140	0.435	0.450
STA AV	1.746	1.891	2.867	2.301	1.496	1.058	0.743	0.290	0.231	0.204	0.394	0.946

NOTES: To convert CFS to IN/DAY, multiply by 0.0786. STA AV based on 33 yr period, part-year records included.

1969	SELECTED RUNOFF EVENT					COSHOCTON, OHIO WATERSHED 196					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7 - 8, 1969											
RG 000108			RG 000108								
7- 7	0.0	0.055	7- 7	804	0.0	0.0	7- 7	900	1.860	0.0	
				834	0.1200	0.06		930	3.620	0.0045	
				854	0.0900	0.09		940	5.400	0.0069	
				914	0.0	0.09		946	7.500	0.0090	
				924	0.6600	0.20		949	10.200	0.0105	
WATERSHED CONDITIONS:											
Woods, 27%; grassland, 50%;				931	0.2571	0.23		950	13.600	0.0111	
cultivated, 19%; miscellaneous				934	1.3998	0.30		952	19.600	0.0128	
4%; watershed in prevailing				948	0.3000	0.35		956	22.400	0.0174	
practice.				947	2.9999	0.50		957	37.000	0.0193	
				955	1.1251	0.65		958	56.000	0.0217	
				1014	0.0947	0.68		1000	69.000	0.0289	
				1044	0.1400	0.75		1004	75.000	0.0445	
								1012	66.400	0.0752	
								1020	56.000	0.1018	
								1030	48.100	0.1304	
								1050	42.500	0.1796	
								1100	35.300	0.2010	
								1110	28.500	0.2181	
								1120	25.100	0.2328	
								1130	21.400	0.2456	
								1144	18.700	0.2607	
								1200	16.000	0.2760	
								1330	10.200	0.3403	
								1430	7.500	0.3693	
								1500	5.780	0.3802	
								1800	3.620	0.4264	
								2400	2.460	0.4861	
							7- 8	600	2.140	0.5313	
								1200	1.690	0.5689	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00327307.



EVENT OF JULY 7 - 8, 1969
COSHOCTON, OHIO WATERSHED 196

COSHOCTON, OHIO WATERSHED 10

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Little Mill Creek, Walhonding River, Muskingum River Basin.

AREA: 122.00 acres

SOILS: (Revision) Coshocton-Rayne silt loams - 73 percent; Rayne silt loam - 11 percent; Keene silt loam - 9 percent; Orrville silt loam - 3 percent; Berks shaly silt loam - 3 percent; Dekalb channery sandy loam - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 10			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.63	0.78	1.65	2.28	2.59	5.34	12.51	2.95	1.34	2.25	3.16	2.71	40.24			
	Q	0.969	0.810	0.771	0.807	0.456	0.357	5.368	0.860	0.181	0.062	0.233	0.354	11.229			
STA AV	P	2.81	2.43	3.46	3.40	3.68	4.10	4.48	2.84	2.52	2.20	2.56	2.39	36.88			
	Q	1.159	1.328	1.860	1.507	0.911	0.678	0.513	0.182	0.121	0.144	0.235	0.618	9.255			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge				Maximum Volume for Selected Time Interval											
		Date	Rate	1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7- 5	0.758	7- 5	0.552	7- 5	0.804	7- 5	1.817	7- 5	2.104	7- 5	2.370	7- 5	2.588	7- 5	3.461
MAXIMUMS FOR PERIOD OF RECORD																	
		6-28	1.760	6-28	0.980	6-28	1.390	7- 5	1.817	7- 5	2.104	7- 5	2.370	7- 5	2.588	7- 5	3.461
		1957		1957		1957		1969		1969		1969		1969		1969	

NOTES: Watershed conditions: Cover of 21% cropland, 48% grassland, 25% woodland, 6% miscellaneous, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.31-4. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.31-1 and 26.37-2. Precipitation data from rain gage 27 and 91. Precipitation and runoff records began Jan. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													
COSHOCTON, OHIO WATERSHED 10													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	1.56	0.0	
2	0.0	0.02M	0.0	0.06E	0.0	1.11	0.0	0.0	0.20	1.32	0.19	0.0	
3	0.0	0.02M	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.08	0.0	
4	0.0	0.0	0.0	0.05	0.0	0.0	0.32	0.0	0.0	0.0	0.04	0.0	
5	0.0	0.0	0.0	0.64	0.0	0.35	5.74E	0.07	0.05E	0.0	0.0	0.0	
6	0.04S	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.0	0.0	0.0	
7	0.04S	0.0	0.0	0.0	0.0	0.0	0.60E	0.0	0.0	0.09	0.0	0.66	
8	0.06	0.54	0.0	0.0	1.02	0.13	0.0	0.25	0.0	0.0	0.0	0.0	
9	0.11	0.03M	0.0	0.05E	0.19	0.0	0.0	0.90	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.05S	0.16	0.54	0.0	1.01E	0.0	0.0	0.0	0.0	0.37	
11	0.0	0.0	0.06S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.13M	
12	0.0	0.06S	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.03	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.02	0.15M	0.03S	
14	0.0	0.0	0.0	0.0	0.0	0.20E	0.0	0.0	0.0	0.06	0.07E	0.07S	
15	0.0	0.0	0.0	0.21	0.0	0.17E	0.0	0.0	0.0	0.0	0.0	0.02S	
16	0.04E	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.45	0.0	0.0	0.0	0.05E	0.0	0.03E	0.06	0.32	0.0	0.05E	0.0	
18	0.38	0.0	0.0	0.50	0.30	0.05	0.0	0.05	0.0	0.0	0.05E	0.0	
19	0.0	0.0	0.0	0.0	0.07	0.0	0.17	1.63	0.0	0.0	0.75S	0.0	
20	0.09	0.0	0.17	0.0	0.02	0.0	1.35	0.0	0.0	0.71	0.0	0.0	
21	0.0	0.0	0.0	0.15	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.27S	
22	0.0	0.0	0.0	0.10	0.0	0.07	1.09	0.0	0.0	0.0	0.0	0.11S	
23	0.0	0.0	0.0	0.10	0.0	1.47	0.07	0.0	0.0	0.0	0.19	0.08S	
24	0.0	0.0	1.07	0.0	0.0	0.45	0.0	0.0	0.11	0.0	0.0	0.0	
25	0.0	0.0	0.14	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.12S	
26	0.0	0.02S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	1.78	0.0	0.04	0.03E	0.0	0.0	
28	0.34	0.0	0.05M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.57	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S	
30	0.50	0.0	0.0	0.0	0.0	0.21	0.21	0.0	0.0	0.0	0.0	0.30S	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	
TOTAL	2.63	0.78	1.65	2.28	2.59	5.34	12.51	2.95	1.34	2.25	3.16	2.71	
STA AV	2.81	2.43	3.46	3.40	3.68	4.10	4.48	2.84	2.52	2.20	2.56	2.39	

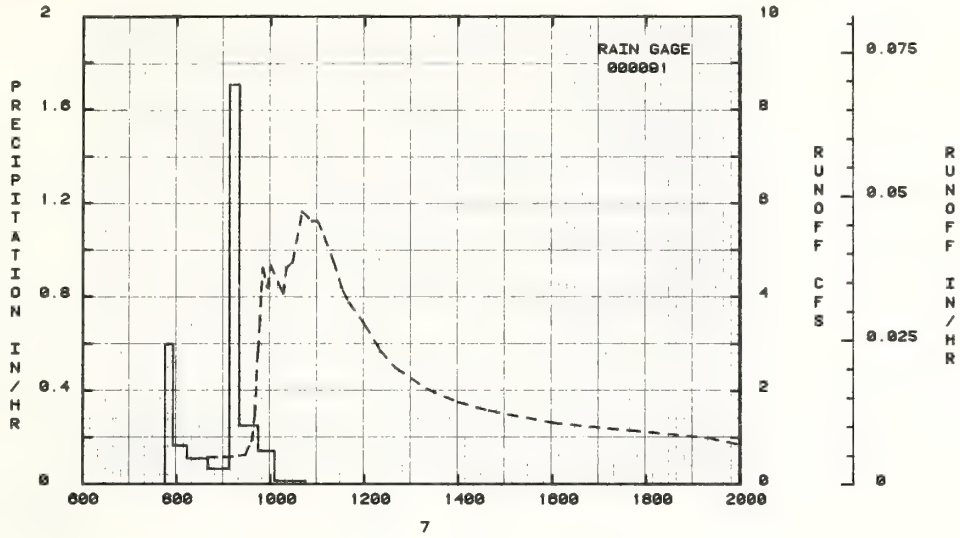
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 27 and 91. STA AV based on 31 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 10												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.120	0.440	0.102	0.179	0.078	0.033	0.036	0.190	0.055	0.007	0.076	0.032
2	0.103	0.319	0.102	0.169	0.062	0.116	0.030	0.159	0.057	0.056	0.103	0.030
3	0.086	0.247	0.102	0.159	0.055	0.078	0.030	0.129	0.055	0.021	0.041	0.026
4	0.078	0.180	0.102	0.159	0.055	0.070	0.030	0.111	0.055	0.014	0.034	0.024
5	0.070	0.139	0.102	0.371	0.055	0.077	11.966	0.094	0.091	0.011	0.029	0.024
6	0.062	0.120	0.102	0.315	0.055	0.062	1.315	0.086	0.062	0.010	0.028	0.024
7	0.055	0.120	0.102	0.223	0.048	0.048	1.324	0.078	0.048	0.010	0.028	0.076
8	0.055	0.211	0.102	0.190	0.100	0.036	0.501	0.074	0.042	0.010	0.028	0.066
9	0.055	0.353	0.102	0.169	0.096	0.030	0.263	0.188	0.042	0.009	0.028	0.055
10	0.055	0.201	0.102	0.179	0.165	0.030	1.743	0.144	0.042	0.008	0.026	0.075
11	0.048	0.169	0.102	0.139	0.177	0.030	0.488	0.094	0.042	0.007	0.024	0.178
12	0.042	0.139	0.102	0.120	0.103	0.035	0.267	0.078	0.042	0.006	0.024	0.127
13	0.042	0.120	0.102	0.120	0.086	0.044	0.180	0.070	0.042	0.006	0.024	0.097
14	0.036	0.111	0.102	0.120	0.086	0.037	0.149	0.062	0.042	0.005	0.022	0.089
15	0.030	0.102	0.102	0.120	0.078	0.040	0.112	0.055	0.036E	0.004	0.020	0.078
16	0.030	0.102	0.102	0.103	0.070	0.036	0.078	0.150	0.024E	0.004	0.020	0.067
17	0.101	0.094	0.102	0.086	0.070	0.030	0.080	0.246	0.019E	0.004	0.020	0.061
18	0.378	0.086	0.102	0.127	0.074	0.030	0.102	0.150	0.014E	0.004	0.020	0.055
19	0.151	0.086	0.102	0.122	0.062	0.030	0.119	0.989E	0.010E	0.004	0.126	0.049
20	0.111	0.086	0.094	0.086	0.048	0.024	0.790	0.235	0.008	0.029	0.070	0.047
21	0.102	0.086	0.086	0.086	0.042	0.019	0.266	0.180	0.006	0.019	0.050	0.047
22	0.102	0.086	0.086	0.086	0.042	0.019	1.989E	0.149	0.006	0.009	0.042	0.044
23	0.094	0.086	0.086	0.094	0.042	0.246	0.570	0.129	0.006	0.008	0.048	0.042
24	0.086	0.086	0.143	0.094	0.042	0.104	0.281	0.111	0.011	0.008	0.050	0.042
25	0.078	0.086	0.381	0.086	0.073	0.129	0.212	0.094	0.014	0.008	0.042	0.042
26	0.070	0.094	0.234	0.086	0.111	0.111	0.169	0.078	0.013	0.008	0.039	0.042
27	0.070	0.102	0.190	0.086	0.094	0.094	2.948E	0.062	0.011	0.007	0.036	0.042
28	0.082	0.102	0.179	0.086	0.086	0.078	0.662	0.055	0.010	0.006	0.034	0.042
29	0.359		0.179	0.086	0.078	0.062	0.307	0.055	0.009	0.006	0.032	0.045
30	1.372		0.179	0.086	0.062	0.048	0.260	0.055	0.008	0.006	0.032	0.053
31	0.843		0.179		0.042		0.247	0.055		0.006		0.091
MEAN	0.1602	0.1484	0.1276	0.1378	0.0755	0.0609	0.8876	0.1422	0.0309	0.0103	0.0399	0.0585
INCHES	0.969	0.810	0.771	0.807	0.456	0.357	5.368	0.860	0.181	0.062	0.233	0.354
STA AV	1.159	1.328	1.860	1.507	0.911	0.678	0.513	0.182	0.121	0.144	0.235	0.618

NOTES: To convert CFS to IN/DAY, multiply 0.19510. STA AV based on 31 yr period.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 10		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	EG 000091	0.038	7- 7	EG 000091	0.0	0.0	7- 7	820	0.540	0.0	
	0.0			745	0.5999	0.10		840	0.580	0.0015	
				813	0.1667	0.15		900	0.580	0.0031	
				840	0.1111	0.20		920	0.610	0.0047	
				907	0.0667	0.23		928	0.640	0.0054	
WATERSHED CONDITIONS:											
Cover of 21%, cropland; 48%,				920	1.7077	0.60		936	0.920	0.0062	
grassland; 25%, woodland; 6%,				944	0.2500	0.70		940	1.480	0.0068	
miscellaneous; watershed in				1005	0.1429	0.75		942	2.230	0.0073	
improved practice.				1045	0.0150	0.76		944	2.850	0.0079	
								946	3.410	0.0088	
								948	4.120	0.0098	
								950	4.620	0.0110	
								956	4.180	0.0145	
								1000	4.680	0.0170	
								1016	4.060	0.0264	
								1020	4.620	0.0287	
								1028	4.750	0.0338	
								1040	5.820	0.0424	
								1052	5.620	0.0517	
								1100	5.620	0.0579	
								1108	5.280	0.0638	
								1120	4.750	0.0719	
								1132	4.120	0.0791	
								1140	3.880	0.0834	
								1200	3.410	0.0934	
								1220	2.850	0.1018	
								1240	2.480	0.1090	
								1320	2.030	0.1212	
								1400	1.750	0.1315	
								1440	1.570	0.1405	
								1600	1.310	0.1561	
								1740	1.150	0.1727	
								1920	0.990	0.1872	
								2200	0.840	0.2070	
								2400	0.770	0.2201	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00812902.



EVENT OF JULY 7, 1969
COSBOCTON, OHIO WATERSHED 10

COSHOCTON, OHIO WATERSHED 5

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Little Mill Creek, Walhonding River, Muskingum River Basin.

AREA: 349.00 acres

SOILS: (Revision) Coshocton-Bayne silt loams - 26 percent; Dekalb channery sandy loam - 25 percent; Bayne silt loam - 15 percent; Keene silt loam - 9 percent; strip mine spoil, sandstone materials - 8 percent; Clarksburg silt loam - 6 percent; Bayne-Dekalb complex - 4 percent; Orrville silt loam - 3 percent; Chagrin silt loam - 1 percent; Coshocton silt loam - 1 percent; Glenford silt loam - 1 percent; strip mine spoil, reclaimed - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 5	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	2.59	0.78	1.57	2.28	2.44	5.41	13.19	2.89	1.34	2.27	3.17	2.72	40.65	
	Q	1.213	0.722	0.383	0.761	0.355	0.465	5.316	0.393	0.082	0.150	0.466	0.448	10.755	
STA AV	P	2.81	2.38	3.45	3.38	3.75	4.03	4.52	2.89	2.59	2.15	2.65	2.43	37.02	
	Q	1.378	1.444	2.189	1.741	1.143	0.771	0.594	0.202	0.116	0.175	0.319	0.719	10.791	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days	
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-5	0.821	7-5	0.516	7-5	0.840	7-5	1.700	7-5	2.088	7-5	2.495	7-5	2.809
MAXIMUMS FOR PERIOD OF RECORD															
		6-28	1.090	6-28	0.770	6-28	1.040	7-5	1.700	7-5	2.088	7-5	2.495	7-5	2.809
		1957		1957		1957		1969		1969		1969		1969	

NOTES: Watershed conditions: Cover of 20% cropland, 54% grassland, 23% woodland, 3% miscellaneous, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 26.32-5 (Revised). For Geology description and map, see foregoing reference, pp. 26.32-1 and 26.37-2. Precipitation data from rain gage 91. Precipitation and runoff records began Jan. 1940. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 5	
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	1.59	0.0		
2	0.0	0.02S	0.0	0.03E	0.0	0.0	1.10	0.0	0.0	0.25	1.35	0.19	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.09	0.0		
4	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.40	0.0	0.0	0.0	0.03	0.0		
5	0.0	0.0	0.0	0.0	0.64	0.0	0.40	6.28	0.07	0.05	0.0	0.0	0.0		
6	0.03S	0.10S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.0		
7	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.76	0.0	0.0	0.08	0.0	0.67		
8	0.05	0.52	0.0	0.0	0.90	0.0	0.16	0.0	0.25	0.0	0.0	0.0	0.0		
9	0.11	0.03S	0.0	0.05	0.10	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.18	0.59	0.0	0.0	1.29	0.0	0.0	0.0	0.0	0.37		
11	0.0	0.0	0.05S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12H		
12	0.0	0.05S	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.03	0.10H	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.0	0.17E	0.0	0.0	0.0	0.05	0.10H	0.07S		
15	0.0	0.0	0.0	0.0	0.20	0.0	0.21E	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.45	0.0	0.0	0.0	0.05E	0.0	0.0	0.02E	0.07	0.34	0.0	0.05E	0.0		
18	0.39	0.0	0.0	0.0	0.49	0.32	0.05	0.0	0.10	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.15	1.50	0.0	0.0	0.77S	0.0		
20	0.08	0.0	0.17	0.0	0.0	0.0	0.0	1.35	0.0	0.0	0.73	0.0	0.0		
21	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.10	0.0	0.0	0.05	0.84	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.14	0.0	0.0	1.45	0.15	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	1.05	0.0	0.0	0.52	0.0	0.0	0.10	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.12	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.03S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.59	0.0	0.05	0.03	0.0	0.0		
28	0.33	0.0	0.05H	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.57	0.0	0.05H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.50	0.0	0.0	0.0	0.0	0.0	0.15	0.22	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL		2.59	0.78	1.57	2.28	2.44	5.41	13.19	2.89	1.34	2.27	3.17	2.72		
STA AV		2.81	2.38	3.45	3.38	3.75	4.03	4.52	2.89	2.59	2.15	2.65	2.43		

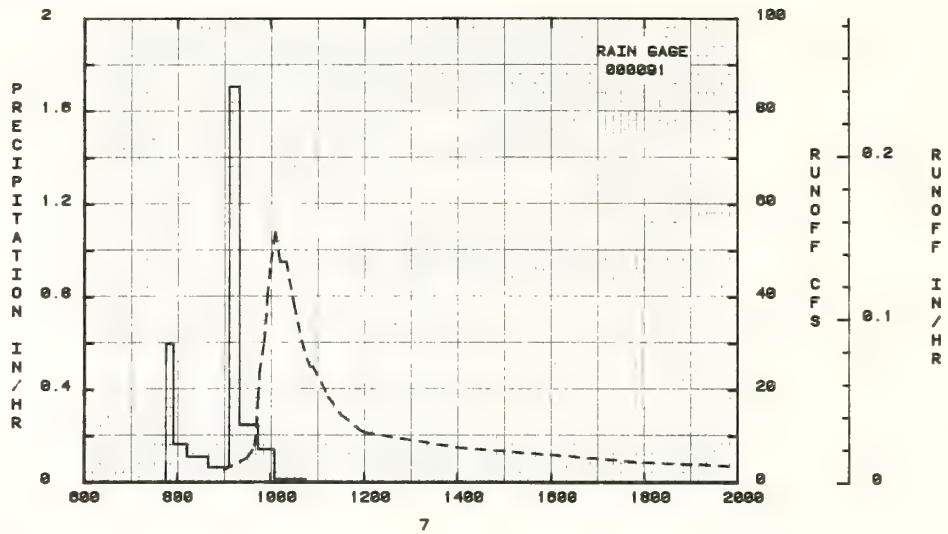
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 91. STA AV based on 30 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 5												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.492	1.300	0.083	0.252	0.139E	0.038E	0.084	0.222E	0.024	0.022	1.141	0.095
2	0.479	1.002	0.078	0.307	0.119E	0.626E	0.053	0.173E	0.071	0.701	0.869	0.087
3	0.428	0.786	0.069	0.244	0.106E	0.127	0.045	0.155E	0.052	0.113	0.254	0.087
4	0.317	0.592	0.061	0.218	0.098E	0.061	0.042	0.144E	0.040	0.044	0.198	0.074
5	0.244	0.481	0.061	1.376	0.090E	0.329	36.001	0.134	0.043	0.031	0.154	0.066
6	0.244	0.415	0.072	0.934	0.083	0.115	5.203	0.129	0.326	0.027	0.095	0.066
7	0.244	0.415	0.075	0.683	0.074	0.063	6.454	0.115	0.056	0.035	0.074	0.651
8	0.236	0.767	0.077	0.607	0.370	0.122	2.382	0.163	0.036	0.033	0.069	0.326
9	0.220	0.935	0.074	0.525	0.279	0.161	1.520	0.802	0.030	0.025	0.066	0.213
10	0.175	0.534	0.064	0.542	0.673	0.040	6.285	0.336	0.024	0.023	0.064	0.358
11	0.134	0.466	0.056	0.362	0.629	0.035	1.945	0.151	0.022	0.022	0.061	0.747
12	0.124	0.404	0.050	0.294	0.348	0.090E	1.272	0.119	0.020	0.022	0.056	0.427
13	0.124	0.298	0.044	0.252	0.270	0.215	0.901	0.095	0.019	0.022	0.058	0.320E
14	0.134	0.228	0.038	0.236	0.241	0.067	0.715E	0.074	0.018	0.023	0.070	0.302E
15	0.139	0.228	0.036	0.283	0.206	0.135	0.538E	0.066	0.017	0.023	0.048	0.276
16	0.139	0.228	0.036	0.230	0.167	0.065E	0.366	0.066	0.017	0.024	0.054	0.236
17	0.258	0.220	0.040	0.200	0.144	0.046	0.311	0.066	0.070	0.023	0.066	0.198
18	1.701	0.198	0.046	0.452	0.207	0.047	0.240	0.288	0.031	0.019	0.069	0.185
19	0.527E	0.157	0.050	0.356	0.176	0.042	0.246	1.521E	0.019	0.019	1.069	0.185
20	0.415	0.111	0.073	0.268	0.122	0.033	1.577	0.212E	0.018	0.460	0.384	0.167E
21	0.415	0.098	0.076	0.262	0.092	0.023	0.510	0.140	0.019	0.153E	0.260	0.150
22	0.415	0.110	0.051	0.289	0.080	0.024	1.323E	0.106	0.019	0.055	0.236	0.144
23	0.453	0.119	0.046	0.340	0.074	2.628E	0.698E	0.087	0.021	0.044	0.282	0.134
24	0.453	0.110	0.500	0.314	0.064	0.742E	0.536	0.080	0.029	0.036	0.290	0.114
25	0.415	0.098	1.261E	0.252	0.104	0.414E	0.407	0.069	0.026	0.033	0.192	0.106
26	0.415	0.094	0.678	0.228	0.073	0.218	0.312	0.056	0.024	0.033	0.156	0.114
27	0.415	0.094E	0.511	0.205	0.053	0.149	4.701E	0.048	0.034	0.031	0.139	0.095
28	0.472	0.087	0.392	0.278	0.042	0.105	1.421	0.042	0.027	0.027	0.129	0.087
29	1.624		0.358	0.203	0.034	0.083	0.868	0.038	0.022	0.024	0.114	0.118
30	3.752		0.304	0.167E	0.027	0.075	0.675E	0.036	0.022	0.024	0.110	0.152
31	2.187		0.252		0.023		0.314E	0.030		0.024		0.286
MEAN	0.5739	0.3778	0.1812	0.3721	0.1682	0.2273	2.5144	0.1861	0.0400	0.0709	0.2277	0.2119
INCHES	1.213	0.722	0.383	0.761	0.355	0.465	5.316	0.393	0.082	0.150	0.466	0.448
STA AV	1.378	1.444	2.189	1.741	1.143	0.771	0.594	0.202	0.116	0.175	0.319	0.719

NOTES: To convert CFS to IN/DAY, multiply by 0.068200. STA AV based on 30 yr period.

1969	SELECTED RUNOFF EVENT			COSHOCTON, OHIO WATERSHED 5						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
RG 000091			RG 000091							
7- 7	0.0	0.065	7- 7	745	0.0	0.0	7- 7	900	2.750	0.0
				755	0.5999	0.10		930	5.390	0.0058
				813	0.1667	0.15		940	8.000	0.0089
				840	0.1111	0.20		942	12.100	0.0099
				907	0.0667	0.23		944	18.400	0.0113
WATERSHED CONDITIONS:				920	1.7077	0.60		946	23.700	0.0134
Cover of 20%, cropland; 54%,				944	0.2500	0.70		952	30.400	0.0209
grassland; 23%, woodland; 3%,				1005	0.1429	0.75		956	40.100	0.0276
miscellaneous; watershed in				1045	0.0150	0.76		1000	47.600	0.0364
improved practice.								1006	53.900	0.0505
								1012	47.600	0.0651
								1020	47.600	0.0831
								1030	38.300	0.1036
								1040	30.400	0.1196
								1050	25.000	0.1328
								1054	25.000	0.1375
								1114	18.400	0.1580
								1130	14.600	0.1706
								1154	11.400	0.1853
								1200	10.800	0.1885
								1400	7.530	0.2406
								1800	4.370	0.3082
								2400	3.490	0.3752

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00284166.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 5

COSHOCTON, OHIO WATERSHED 92

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Little Mill Creek, Walhonding River, Muskingum River Basin.

AREA: 920.00 acres 1.44 sq. miles

SOILS: (REVISION) Coshocton-Rayne silt loams - 34 percent; Dekalb channery sandy loam - 16 percent; Rayne silt loam 14 percent; Keene silt loam - 12 percent; Clarksburg silt loam - 8 percent; Orrville silt loam - 3 percent; strip mine spoil, shale materials - 3 percent; Berks shaly silt loam - 2 percent; Chagrin silt loam - 2 percent; Rayne-Dekalb complex - 2 percent; stony colluvial land, Dekalb soil materials - 2 percent; Dekalb extremely stony sandy loam - 1 percent; Glenford silt loam - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														CGSHOCTON, OHIO		WATERSHED 92			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	2.59	0.78	1.57	2.28	2.44	5.41	13.19	2.89	1.34	2.27	3.17	2.72	40.65					
	Q	1.252	0.970	0.530	0.946	0.492	0.455	6.748	0.534	0.086	0.126	0.484	0.585	13.208					
STA AV	P	2.79	2.43	3.46	3.39	3.67	4.08	4.55	2.86	2.53	2.22	2.58	2.40	36.97					
	Q	1.494	1.660	2.401	1.916	1.199	0.831	0.624	0.189	0.116	0.183	0.369	0.826	11.807					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7- 5	0.780	7- 5	0.625	7- 5	1.101	7- 5	2.417	7- 5	2.908	7- 5	3.377	7- 5	3.730	7- 5	5.164		
MAXIMUMS FOR PERIOD OF RECORD																			
		7- 5	0.780	7- 5	0.625	7- 5	1.101	7- 5	2.417	7- 5	2.908	7- 5	3.377	7- 5	3.730	7- 5	5.164		
		1969		1969		1969		1969		1969		1969		1969		1969		1969	

NOTES: Watershed conditions: Cover of 16% cropland, 59% grassland, 21% woodland, 4% miscellaneous improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 26.32-5 (Revised). For Geology description and map, see foregoing reference, pp. 26.33-1 and 26.37-2. Precipitation data from rain gage 91. Precipitation and runoff records began Jan. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 92	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	1.59	0.0		
2	0.0	0.02S	0.0	0.03E	0.0	1.10	0.0	0.0	0.25	1.35	0.19	0.0		
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.09	0.0		
4	0.0	0.0	0.0	0.05	0.0	0.0	0.40	0.0	0.0	0.0	0.03	0.0		
5	0.0	0.0	0.0	0.64	0.0	0.40	6.28	0.07	0.05	0.0	0.0	0.0		
6	0.03S	0.10S	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.0		
7	0.04S	0.0	0.0	0.0	0.0	0.0	0.76	0.0	0.0	0.08	0.0	0.67		
8	0.05	0.52	0.0	0.0	0.90	0.16	0.0	0.25	0.0	0.0	0.0	0.0		
9	0.11	0.03S	0.0	0.05	0.10	0.0	0.0	0.90	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.04S	0.18	0.59	0.0	1.29	0.0	0.0	0.0	0.0	0.37		
11	0.0	0.0	0.05S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.12E		
12	0.0	0.05S	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.03	0.10E	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.17E	0.0	0.0	0.0	0.05	0.10E	0.07S		
15	0.0	0.0	0.0	0.20	0.0	0.21E	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.45	0.0	0.0	0.0	0.05E	0.0	0.02E	0.07	0.34	0.0	0.05E	0.0		
18	0.39	0.0	0.0	0.49	0.32	0.05	0.0	0.10	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.10	0.0	0.15	1.50	0.0	0.0	0.77S	0.0		
20	0.08	0.0	0.17	0.0	0.0	0.0	1.35	0.0	0.0	0.73	0.0	0.0		
21	0.0	0.0	0.0	0.17	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.10	0.0	0.05	0.84	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.14	0.0	1.45	0.15	0.0	0.0	0.0	0.20	0.08S		
24	0.0	0.0	1.05	0.0	0.0	0.52	0.0	0.0	0.10	0.0	0.0	0.0		
25	0.0	0.0	0.12	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.03S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	1.59	0.0	0.05	0.03	0.0	0.0		
28	0.33	0.0	0.05E	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.57	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.50	0.0	0.0	0.0	0.0	0.15	0.22	0.0	0.0	0.0	0.0	0.30S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S		
TOTAL	2.59	0.78	1.57	2.28	2.44	5.41	13.19	2.89	1.34	2.27	3.17	2.72		
STA AV	2.79	2.43	3.46	3.39	3.67	4.08	4.55	2.86	2.53	2.22	2.58	2.40		

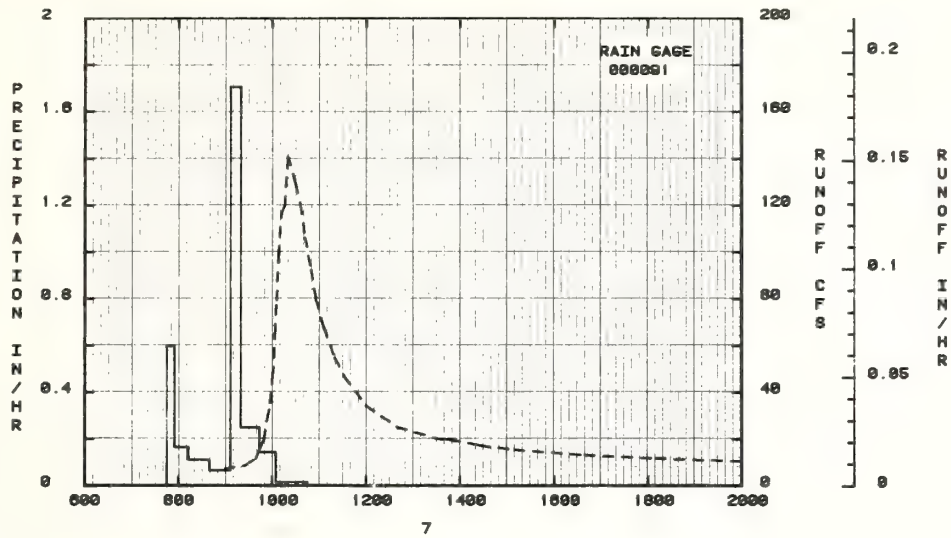
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 91. STA AV based on 31 yr period.

1969		MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO				WATERSHED 92			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	1.20	4.60	0.37	1.00	0.62	0.12	0.28	1.47	0.12E	0.04	1.69	0.35		
2	1.13	3.13	0.36	1.06	0.54	1.19	0.19	1.20	0.20E	1.45	2.63	0.32		
3	0.93	2.75	0.34	0.86	0.46	0.56	0.17	1.00	0.21	0.34	0.89	0.33		
4	0.66	2.02	0.32E	0.79	0.43	0.27	0.15	0.84	0.15	0.13	0.64	0.29		
5	0.49	1.67	0.31	3.30	0.38	0.61	127.59	0.76	0.14	0.09	0.45	0.25		
6	0.50	1.43	0.31	2.64	0.35	0.46	16.57	0.64	0.67	0.08	0.31	0.25		
7	0.51	1.28	0.31	1.98	0.33	0.26	16.79	0.49	0.22	0.09	0.26	1.38		
8	0.49	1.92	0.31	1.74	0.98	0.34	6.40	0.63	0.16	0.08	0.24	1.06		
9	0.44	3.00	0.29	1.57	1.01	0.24E	4.22	1.76	0.12	0.06	0.21	0.76		
10	0.32	1.82	0.26E	1.60	1.84	0.19E	18.69	0.99	0.09E	0.06	0.19	1.00		
11	0.24	1.60	0.24	1.28	2.06	0.14	6.15	0.53	0.07	0.05	0.19	2.23		
12	0.21E	1.49	0.22E	1.10	1.38	0.22E	3.98	0.43	0.05	0.05	0.20	1.53		
13	0.20	1.36	0.21E	1.02	1.13	0.59E	2.93	0.35	0.04	0.07	0.19	1.27E		
14	0.20	1.20	0.21E	0.95	0.93	0.23	1.97	0.28	0.04	0.06	0.25	1.23		
15	0.20	1.00	0.20E	1.05	0.74	0.39	1.52	0.25	0.03	0.06	0.19	1.10		
16	0.21	0.86	0.20	0.91	0.62	0.25	1.26	0.24	0.03	0.06	0.19	0.91		
17	0.55	0.78	0.21	0.82	0.54	0.17	1.13	0.25	0.14	0.05	0.21	0.74		
18	4.66	0.70	0.25	1.35	0.70	0.17E	0.95	0.51	0.11	0.05	0.21	0.70		
19	1.51	0.62	0.25	1.26	0.68	0.16	0.87	3.77	0.07	0.05	2.46	0.70		
20	1.18	0.53	0.29	1.05E	0.47	0.13	4.48	1.09	0.06	0.75	1.15	0.65E		
21	1.20	0.50	0.34	1.01E	0.37	0.09	1.75	0.63	0.06	0.40	0.78	0.63		
22	1.29	0.51	0.24	1.06E	0.34	0.09	6.04	0.49	0.05	0.13	0.70	0.59E		
23	1.47	0.53	0.21	1.19E	0.31	5.22	3.10	0.39	0.05	0.09	0.78	0.50		
24	1.47	0.51	1.35	1.10	0.27	1.78	2.04	0.33	0.09	0.08	0.75	0.42		
25	1.15	0.46	3.95	0.95	0.37	1.42	1.67	0.28	0.08	0.07	0.63	0.39		
26	0.87	0.43	2.38	0.86	0.33	0.80	1.35	0.24	0.06	0.08	0.54	0.42		
27	0.70	0.40	1.67	0.78	0.23	0.55	15.99	0.20	0.05E	0.08	0.49	0.36		
28	0.89	0.38	1.43	0.80	0.19	0.38	5.14	0.18	0.05E	0.07	0.46	0.32		
29	3.63		1.28	0.80	0.16	0.30	3.14	0.16	0.05	0.06	0.42	0.40		
30	12.44		1.13	0.68	0.14	0.25	2.42E	0.15	0.04	0.06	0.39	0.53		
31	7.23		1.02		0.11		1.89	0.13		0.06		0.99		
MEAN	1.5533	1.3384	0.6605	1.2193	0.6137	0.5864	8.4134	0.6664	0.1107	0.1570	0.6240	0.7288		
INCHES	1.252	0.970	0.530	0.946	0.492	0.455	6.748	0.534	0.086	0.126	0.484	0.585		
STA AV	1.494	1.660	2.401	1.916	1.199	0.831	0.624	0.189	0.116	0.183	0.369	0.826		

NOTES: To convert CPS to IN/DAY, multiply 0.025872. STA AV based on 31 yr period.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 92		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	BG 000091		7- 7	BG 000091			7- 7				
	0.0	0.072		745	0.0	0.0		900	7.100	0.0	
				755	0.5999	0.10		926	8.820	0.0037	
				813	0.1667	0.15		940	11.700	0.0063	
				840	0.1111	0.20		944	15.300	0.0073	
				907	0.0667	0.23		950	19.700	0.0092	
WATERSHED CONDITIONS:											
Cover of 16%, cropland; 59%,				920	1.7077	0.60		954	28.700	0.0109	
grassland; 21%, woodland;				944	0.2500	0.70		958	35.500	0.0132	
4%, miscellaneous; watershed				1005	0.1429	0.75		1000	43.400	0.0147	
in improved practice.				1045	0.0150	0.76		1001	46.800	0.0155	
								1004	65.200	0.0186	
								1006	79.300	0.0210	
								1008	98.600	0.0244	
								1012	117.000	0.0321	
								1016	120.000	0.0406	
								1020	141.000	0.0499	
								1030	129.000	0.0743	
								1036	120.000	0.0874	
								1042	106.000	0.0998	
								1050	92.100	0.1140	
								1056	79.300	0.1230	
								1106	67.400	0.1363	
								1120	54.500	0.1517	
								1132	46.800	0.1626	
								1200	34.100	0.1830	
								1240	25.000	0.2042	
								1336	19.700	0.2267	
								1348	19.700	0.2309	
								1426	17.100	0.2435	
								1510	15.300	0.2563	
								1640	13.100	0.2793	
								1810	11.700	0.2994	
								2000	10.500	0.3214	
								2210	9.380	0.3446	
								2400	8.560	0.3624	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00107798.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 92

COSHOCTON, OHIO WATERSHED 94

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Little Mill Creek, Walhonding River, Muskingum River Basin.

AREA: 1520.00 acres 2.37 sq. miles

SOILS: (Revision) Coshocton-Bayne silt loams - 36 percent; Dekalb, channery sandy loam - 15 percent; Bayne silt loam - 12 percent; Keene silt loam - 10 percent; Clarksburg silt loam - 8 percent; Orrville silt loam - 5 percent; Bayne-Dekalb complex - 4 percent; stony colluvial land, Dekalb soil materials - 2 percent; strip mine spoil, sandstone materials - 2 percent; strip mine spoil, shale materials - 2 percent; Berks shaly silt loam - 1 percent; Chagrin silt loam - 1 percent; Dekalb extremely stony sandy loam - 1 percent; Glenford silt loam - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Barrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 94											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	2.63	0.78	1.65	2.28	2.59	5.34	12.51	2.95	1.34	2.25	3.16	2.71	40.24											
	Q	1.240	1.002	0.571	0.973	0.557	0.481	7.133	0.650	0.142	0.154	0.509	0.629	14.041											
STA AV	P	2.79	2.44	3.46	3.39	3.67	4.07	4.53	2.86	2.53	2.21	2.57	2.39	36.92											
	Q	1.501	1.643	2.419	1.910	1.220	0.878	0.667	0.221	0.137	0.195	0.349	0.796	11.936											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	Maximum Volume for Selected Time Interval																	
								6 Hours Date	Vol.	12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.								
1969		7-5	0.822	7-5	0.670	7-5	1.152	7-5	2.503	7-5	2.921	7-5	3.409	7-5	3.750	7-5	5.217								
MAXIMUMS FOR PERIOD OF RECORD																									
		6-28	0.920	6-28	0.770	6-28	1.220	7-5	2.503	7-5	2.921	7-5	3.409	7-5	3.750	7-5	5.217								
		1957		1957		1957		1969		1969		1969		1969		1969									

NOTES: Watershed conditions: Cover of 15% cropland, 57% grassland, 24% woodland, 4% miscellaneous, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.34-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.34-1 and 26.37-2. Precipitation data are Thiessen weighted from rain gages 27 and 91. Precipitation and runoff records began Jan. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969		DAILY PRECIPITATION (inches)					COSHOCTON, OHIO WATERSHED 94							
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	1	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	1.56	0.0	
	2	0.0	0.02M	0.0	0.06E	0.0	1.11	0.0	0.0	0.20	1.32	0.19	0.0	
	3	0.0	0.02M	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.08	0.0	
	4	0.0	0.0	0.0	0.05	0.0	0.0	0.32	0.0	0.0	0.0	0.04	0.0	
	5	0.0	0.0	0.0	0.64	0.0	0.35	5.74E	0.07	0.05E	0.0	0.0	0.0	
	6	0.04S	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.0	0.0	0.0	
	7	0.04S	0.0	0.0	0.0	0.0	0.0	0.60E	0.0	0.0	0.09	0.0	0.66	
	8	0.06	0.54	0.0	0.0	1.02	0.13	0.0	0.25	0.0	0.0	0.0	0.0	
	9	0.11	0.03M	0.0	0.05E	0.19	0.0	0.0	0.90	0.0	0.0	0.0	0.0	
	10	0.0	0.0	0.05S	0.16	0.54	0.0	1.01E	0.0	0.0	0.0	0.0	0.37	
	11	0.0	0.0	0.06S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.13M	
	12	0.0	0.06S	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.03	0.0	
	13	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.02	0.15M	0.03S	
	14	0.0	0.0	0.0	0.0	0.0	0.20E	0.0	0.0	0.0	0.06	0.07E	0.07S	
	15	0.0	0.0	0.0	0.21	0.0	0.17E	0.0	0.0	0.0	0.0	0.0	0.02S	
	16	0.04E	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	
	17	0.45	0.0	0.0	0.0	0.05E	0.0	0.03E	0.06	0.32	0.0	0.05E	0.0	
	18	0.38	0.0	0.0	0.50	0.30	0.05	0.0	0.05	0.0	0.0	0.05E	0.0	
	19	0.0	0.0	0.0	0.0	0.07	0.0	0.17	1.63	0.0	0.0	0.75S	0.0	
	20	0.09	0.0	0.17	0.0	0.02	0.0	1.35	0.0	0.0	0.71	0.0	0.0	
	21	0.0	0.0	0.0	0.15	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.27S	
	22	0.0	0.0	0.0	0.10	0.0	0.07	1.09	0.0	0.0	0.0	0.0	0.11S	
	23	0.0	0.0	0.0	0.10	0.0	0.0	0.07	0.0	0.0	0.10	3.19	0.08S	
	24	0.0	0.0	1.07	0.0	0.0	0.45	0.0	0.0	0.11	0.0	0.0	0.0	
	25	0.0	0.0	0.14	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.12S	
	26	0.0	0.02S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	27	0.0	0.0	0.0	0.0	0.0	0.0	1.78	0.0	0.04	0.03E	0.0	0.0	
	28	0.34	0.0	0.05M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	29	0.57	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S	
	30	0.50	0.0	0.0	0.0	0.0	0.21	0.21	0.0	0.0	0.0	0.0	0.30S	
	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	
TOTAL		2.63	0.78	1.65	2.28	2.59	5.34	12.51	2.95	1.34	2.25	3.16	2.71	
STA AV		2.79	2.44	3.46	3.39	3.67	4.07	4.53	2.86	2.53	2.21	2.57	2.39	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are Thiessen weighted from rain gages 27 and 91. STA AV based on 31 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 94												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.53	7.51	0.78	1.53	1.10	0.34	0.60	2.52	0.35	0.14	2.83	0.69
2	1.56	5.43	0.74	1.80	1.00	2.64	0.43	2.02	0.48	2.19	4.09	0.65
3	1.47	4.63	0.71	1.53	0.91	1.08	0.39	1.69	0.49	0.71	1.29	0.67
4	1.08	3.32	0.71E	1.43	0.84	0.63	0.35	1.43	0.39	0.34	0.96	0.59
5	0.80E	2.68	0.71	5.60	0.78	1.19	212.28	1.33	0.37	0.26	0.80	0.54
6	0.87E	2.30	0.71	5.02	0.72	0.81	27.16	1.22	1.21	0.23	0.69	0.53
7	0.87E	2.10	0.67	3.53	0.65	0.53	27.40E	1.03	0.52	0.24	0.57	2.26
8	0.82	3.19	0.63	2.97	1.79	0.61	11.39	1.20	0.42	0.24	0.53	1.77
9	0.80	5.61	0.60	2.58	1.79	0.49	6.95	3.06	0.35	0.19	0.49	1.30
10	0.63	3.27	0.54	2.66	3.16	0.40	32.43	1.98	0.29	0.17	0.46	1.64
11	0.46	2.72	0.51E	2.16	3.80	0.34	10.31	1.14E	0.25	0.17	0.46	3.83
12	0.42	2.40	0.51E	1.80	2.25	0.41E	6.47	0.91	0.23	0.17	0.44	2.60
13	0.42	2.06	0.51E	1.60	1.81	1.05	4.38	0.76	0.23	0.16	0.43	2.15
14	0.42	1.80E	0.44	1.53	1.61	0.52	3.29	0.67	0.21	0.19	0.52	2.05
15	0.42	1.57	0.39	1.70	1.40	0.71	2.63	0.60	0.19	0.16	0.40	1.80
16	0.44	1.40	0.45	1.52	1.16	0.53	2.18	0.56	0.19	0.17	0.38	1.49
17	0.87	1.30	0.49	1.36	1.02	0.38	1.93	0.56	0.36	0.16	0.43	1.33
18	7.44	1.21	0.49	2.19	1.27	0.40	1.62	0.78	0.30	0.14	0.46	1.27
19	2.57	1.10	0.47	2.16	1.26	0.40	1.48	8.07	0.20	0.13	3.95	1.21
20	1.84	1.02	0.53	1.69	0.96	0.32	8.41	2.31	0.20	1.04	1.95	1.13
21	1.88	0.98	0.57	1.64	0.80	0.25	3.49	1.40	0.18	0.67	1.40	1.10
22	2.09	0.98	0.45	1.79	0.72	0.23	14.53	1.10	0.16	0.29	1.21	1.03
23	2.34	1.00	0.42	1.98	0.67	7.21	6.82	0.91	0.17	0.22	1.15	0.93
24	2.78	0.95E	0.23	1.89	0.59	2.66	4.30	0.78	0.24	0.19	1.18	0.84
25	1.80	0.91E	6.87	1.60	0.81	2.30	3.21	0.72	0.23	0.19	1.15	0.80
26	1.30	0.89	3.85	1.46	0.68	1.35	2.47	0.61	0.18	0.18	1.01	0.82
27	1.21	0.84	2.80	1.33	0.51	1.02	34.88	0.50	0.19	0.19	0.89	0.80E
28	1.55	0.80	2.30	1.55	0.45	0.78	10.47	0.47	0.19	0.19	0.84	0.74
29	6.07		2.06	1.35	0.40	0.62	5.66	0.44	0.16	0.17	0.80	0.79
30	19.90		1.80	1.19	0.35	0.53	4.21	0.39	0.15	0.17	0.74	1.02
31	12.58		1.60		0.30		3.38	0.35		0.17		1.82
MEAN	2.555	2.285	1.175	2.071	1.148	1.024	14.694	1.339	0.303	0.317	1.083	1.296
INCHES	1.240	1.002	0.571	0.973	0.557	0.481	7.133	0.650	0.142	0.154	0.509	0.629
STA AV	1.501	1.643	2.419	1.910	1.220	0.878	0.667	0.221	0.137	0.195	0.349	0.796

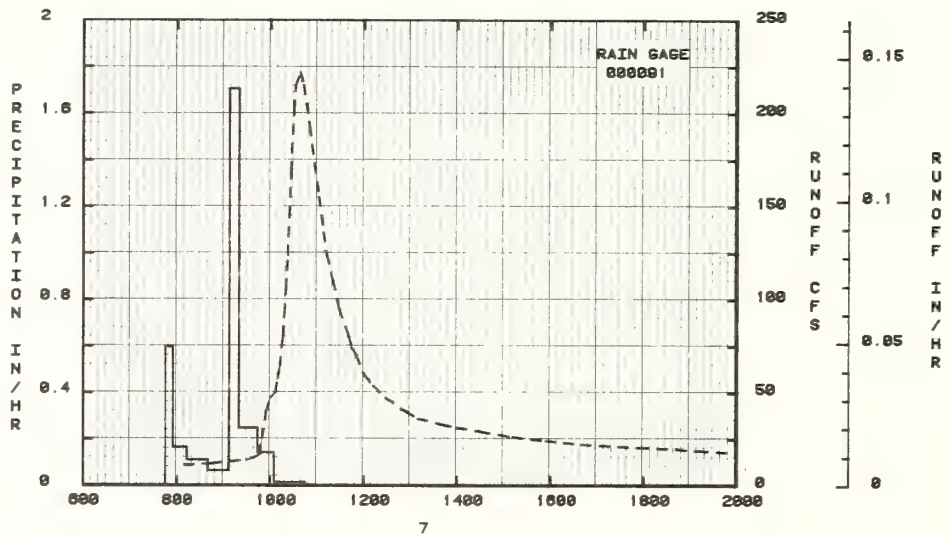
NOTES: To convert CFS to IN/DAY, multiply by 0.015659. STA AV based on 31 yr period.

1969 SELECTED RUNOFF EVENT COSHOCTON, OHIO WATERSHED 94											
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 000091			RG 000091								
7- 7	0.0	0.064	7- 7	745	0.0	0.0	7- 7	810	11.100	0.0	
				755	0.5999	0.10		846	12.000	0.0045	
				813	0.1667	0.15		910	13.200	0.0078	
				840	0.1111	0.20		930	13.900	0.0108	
				907	0.0667	0.23		940	15.300	0.0124	
WATERSHED CONDITIONS:				920	1.7077	0.60		946	16.700	0.0135	
Cover of 15%, cropland; 57%,				944	0.2500	0.70		950	25.600	0.0144	
grassland; 24%, woodland; 4%,				1005	0.1429	0.75		955	39.900	0.0162	
miscellaneous; watershed in				1045	0.0150	0.76		1000	47.100	0.0186	
improved practice.								1006	50.300	0.0217	
								1010	57.800	0.0240	
								1012	64.200	0.0254	
								1016	80.800	0.0285	
								1018	92.500	0.0303	
								1020	106.000	0.0326	
								1022	124.000	0.0349	
								1024	145.000	0.0380	
								1025	155.000	0.0395	
								1026	169.000	0.0412	
								1028	189.000	0.0453	
								1030	202.000	0.0498	
								1032	215.000	0.0541	
								1038	222.000	0.0686	
								1042	215.000	0.0781	
								1050	193.000	0.0958	
								1056	173.000	0.1075	
								1102	155.000	0.1184	
								1108	136.000	0.1280	
								1112	124.000	0.1336	
								1120	110.000	0.1437	
								1128	94.900	0.1526	
								1140	80.800	0.1640	
								1144	74.300	0.1674	
								1150	70.100	0.1722	
								1200	59.600	0.1793	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00065246.

1969	SELECTED RUNOFF EVENT					COSHOCTON, OHIO		WATERSHED 94		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JULY 7, 1969 (CONTINUED)										
							7- 7	1212	53.600	0.1867
								1228	47.100	0.1954
								1254	39.900	0.2077
								1310	36.000	0.2143
								1340	33.000	0.2256
								1400	31.200	0.2326
								1430	29.100	0.2424
								1512	26.100	0.2550
								1554	24.100	0.2665
								1640	22.200	0.2781
								1754	20.600	0.2953
								1910	19.000	0.3117
								2100	17.400	0.3335
								2300	15.900	0.3552
								2400	15.300	0.3654

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00065246.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 94

COSHOCTON, OHIO WATERSHED 95

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Little Mill Creek, Walhonding River, Muskingum River Basin.

AREA: 2570.00 acres 4.02 sq. miles

SOILS: (Revision) Coshocton-Bayne silt loams - 39 percent; Dekalb channery sandy loam - 12 percent; Bayne silt loam - 12 percent; Keene silt loam - 8 percent; Clarksburg silt loam - 6 percent; Orrville silt loam - 5 percent; Bayne-Dekalb complex - 5 percent; Berks shaly silt loam - 3 percent; strip mine spoil, sandstone materials - 3 percent; Chagrin silt loam - 2 percent; Coshocton silt loam - 1 percent; Dekalb extremely stony sandy loam - 1 percent; Glenford silt loam - 1 percent; stony colluvial land, Dekalb soil materials - 1 percent; strip mine spoil, shale materials - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO				WATERSHED 95											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.56	0.77	1.65	2.25	2.65	5.20	12.12	2.89	1.26	2.22	3.10	2.71	39.40	STA AV	P	1.215	0.969	0.532	0.884	0.510	0.428	6.317	0.617	0.128	0.142	0.504	0.603	12.847
	Q																												
	P	2.81	2.43	3.46	3.40	3.69	4.11	4.47	2.84	2.51	2.20	2.57	2.39	36.87		Q	1.477	1.631	2.429	1.922	1.194	0.823	0.610	0.201	0.127	0.185	0.349	0.796	11.744
	Q																												
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge Date		1 Hour Date		2 Hours Date		Maximum Volume for Selected Time Interval Date		6 Hours Date		12 Hours Date		1 Day Date		2 Days Date		8 Days Date											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.		
1969		7- 5	0.540	7- 5	0.444	7- 5	0.775	7- 5	1.873	7- 5	2.305	7- 5	2.668	7- 5	2.963	7- 5	2.963	7- 5	4.292										
MAXIMUMS FOR PERIOD OF RECORD																													
		6-28	0.610	6-28	0.560	6-28	0.950	7- 5	1.873	3- 4	2.320	3- 4	2.780	3- 4	3.490	7- 5	4.292												
		1957		1957		1957		1969		1963		1963		1963		1969													

NOTES: Watershed conditions: Cover of 15% cropland, 55% grassland, 26% woodland, 4% miscellaneous, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.34-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.35-1 and 26.37-2. Precipitation data from rain gages 27, 39 and 91. Precipitation and runoff records began Jan. 1939. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY AIR TEMPERATURE (degrees F)														COSHOCTON, OHIO WATERSHED 95													
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min			
1	12	-2	37	30	41	28	52	25	66	39	88	65	74	59	82	63	87	66	80	56	58	51	35	19			
2	20	5	49	25	35	26	59	35	78	49	73	51	74	55	80	63	75	64	76	59	54	41	36	4			
3	26	10	49	18	44	22	50	34	81	56	57	44	80	58	76	60	79	63	75	58	47	38	34	19			
4	10	4	36	15	38	22	72	37	79	57	70	45	85	64	78	62	80	66	71	51	41	34	26	4			
5	18	0	34	20	43	17	62	39	79	54	69	52	82	64	81	59	82	66	73	48	41	36	35	23			
6	28	17	32	20	40	25	53	36	83	56	80	51	71	64	82	62	80	66	69	49	53	38	33	21			
7	17	7	41	28	36	22	67	35	81	63	74	57	70	61	84	62	76	64	61	52	53	39	43	31			
8	27	3	39	30	39	28	77	46	71	56	70	54	75	55	82	65	74	56	67	47	47	41	39	27			
9	33	9	34	23	33	27	79	55	56	41	69	47	80	64	67	60	60	49	73	41	53	45	40	24			
10	12	6	35	15	28	24	61	45	51	38	69	50	82	69	75	61	65	48	78	52	50	45	37	31			
11	17	3	41	26	24	8	52	37	50	38	81	61	80	65	77	52	66	44	79	60	58	44	36	32			
12	18	8	28	21	30	10	58	33	55	36	87	64	84	65	78	58	72	48	79	63	52	32	35	21			
13	22	12	22	16	38	18	70	38	63	40	81	64	80	59	82	60	77	53	85	55	44	30	36	19			
14	25	15	24	13	35	23	66	52	66	49	81	57	82	63	84	61	77	56	55	39	32	21	38	30			
15	26	18	26	11	40	19	59	49	75	45	57	50	85	66	85	68	79	58	57	34	25	17	30	21			
16	37	19	34	22	48	21	73	56	80	54	67	47	88	66	77	68	80	61	62	45	42	21	29	15			
17	43	35	41	23	59	27	80	51	75	60	74	50	88	72	82	67	79	51	48	34	58	35	32	18			
18	48	31	41	26	66	38	66	42	65	61	71	57	89	72	82	67	66	46	57	29	60	45	33	17			
19	31	26	35	23	67	45	42	33	73	64	80	60	86	70	74	66	64	48	66	46	59	24	33	25			
20	39	25	40	24	72	42	56	29	72	54	77	57	74	67	74	54	63	55	74	54	26	17	25	18			
21	44	30	48	24	42	33	65	38	66	46	69	51	79	67	73	51	73	54	56	42	30	15	29	14			
22	49	33	51	29	52	26	55	37	62	47	75	51	80	67	76	54	78	54	54	28	54	20	28	17			
23	58	38	46	38	60	31	41	36	67	49	77	66	84	67	80	58	72	56	39	24	48	37	19	14			
24	50	18	39	32	55	42	53	41	69	49	77	63	82	66	84	61	64	55	51	22	37	29	22	10			
25	21	13	34	27	46	31	65	36	73	44	83	64	81	64	87	64	72	51	62	40	53	25	22	9			
26	16	6	32	26	36	26	74	46	64	46	89	70	82	62	80	62	71	48	56	42	43	24	26	17			
27	29	8	32	22	39	25	80	56	76	42	90	74	81	66	81	56	60	50	52	35	41	30	24	11			
28	42	20	38	19	54	27	65	44	84	58	87	71	76	66	84	59	61	46	43	28	37	30	30	4			
29	54	40			51	27	44	40	87	63	86	60	73	65	85	63	84	41	50	29	36	27	32	27			
30	54	39			28	21	56	37	76	62	88	68	80	62	86	67	83	52	57	32	34	26	32	30			
31	39	33			32	16			82	57			82	63	86	67			63	39				32	26		
AV.	31	17	37	23	43	25	61	40	71	50	76	57	80	64	80	61	73	54	63	43	45	31	31	19			
REAR	24.1		30.1		34.7		51.2		61.0		67.0		72.3		70.8		63.9		53.3		38.8			25.5			
STA AV	33	19	36	20	46	28	58	42	68	49	79	58	81	62	82	61	75	54	66	44	50	33	37	22			

NOTES: Temperature data based on records at North Appalachian Experimental Watershed. STA AV is for 31 yr (1939-69) record period.

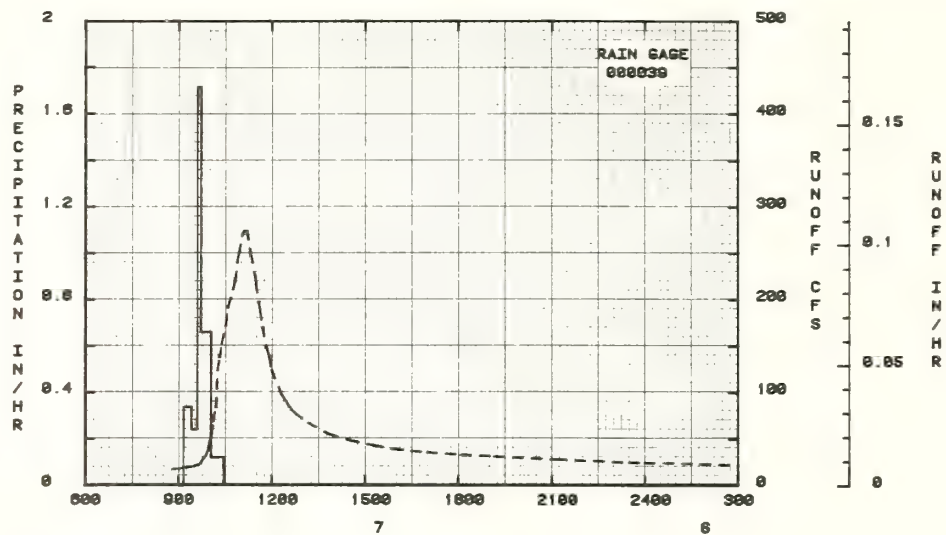
1969	DAILY PRECIPITATION (inches)					COSHOCTON, OHIO WATERSHED 95						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	1.52	0.0
2	0.0	0.02M	0.0	0.08E	0.0	1.14	0.0	0.0	0.18	1.30	0.18	0.0
3	0.0	0.03M	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.08	0.0
4	0.0	0.0	0.0	0.06	0.0	0.0	0.30	0.3	0.0	0.0	0.05	0.0
5	0.0	0.0	0.0	0.63	0.0	0.29	5.48E	0.07	0.05E	0.0	0.0	0.0
6	0.04S	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.0	0.0	0.0
7	0.04S	0.0	0.0	0.0	0.0	0.0	0.65E	0.0	0.0	0.09	0.0	0.65
8	0.05	0.53	0.0	0.0	1.05	0.14	0.0	0.25	0.0	0.0	0.0	0.0
9	0.11	0.03M	0.0	0.05E	0.21	0.0	0.0	0.89	0.0	0.0	0.0	0.0
10	0.0	0.0	0.06S	0.14	0.53	0.0	0.90E	0.0	0.0	0.0	0.0	0.37
11	0.0	0.0	0.06S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.12M
12	0.0	0.06S	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.04	0.0
13	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.03	0.13M	0.03S
14	0.0	0.0	0.0	0.0	0.0	0.20E	0.0	0.0	0.0	0.06	0.08E	0.07S
15	0.0	0.0	0.0	0.22	0.0	0.16E	0.0	0.0	0.0	0.0	0.0	0.02S
16	0.05E	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0
17	0.44	0.0	0.0	0.0	0.05E	0.0	0.02E	0.05	0.31	0.0	0.05E	0.0
18	0.36	0.0	0.0	0.50	0.30	0.05	0.0	0.03	0.0	0.0	0.05E	0.01M
19	0.0	0.0	0.0	0.0	0.08	0.0	0.27	1.60	0.0	0.0	0.73S	0.0
20	0.08	0.0	0.17	0.0	0.02	0.0	1.37	0.0	0.0	0.70	0.0	0.0
21	0.0	0.0	0.0	0.14	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.27S
22	0.0	0.0	0.0	0.10	0.0	0.07	0.85	0.0	0.0	0.0	0.0	0.11S
23	0.0	0.0	0.0	0.10	0.0	1.48	0.05	0.0	0.0	0.0	0.19	0.08S
24	0.0	0.0	1.08	0.0	0.0	0.44	0.0	0.0	0.10	0.0	0.0	0.0
25	0.0	0.0	0.15	0.0	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.12S
26	0.0	0.02S	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	1.89	0.0	0.04	0.03E	0.0	0.0
28	0.33	0.0	0.05M	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.57	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S
30	0.49	0.0	0.0	0.0	0.0	0.22	0.26	0.0	0.0	0.0	0.0	0.30S
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S
TOTAL	2.56	0.77	1.65	2.25	2.65	5.20	12.12	2.89	1.26	2.22	3.10	2.71
STA AV	2.81	2.43	3.46	3.40	3.69	4.11	4.47	2.84	2.51	2.20	2.57	2.39

NOTES: Precipitation amounts are for rain gages 27, 39 and 91. STA AV based on 32 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO WATERSHED 95						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.83	12.28E	1.15	2.50	1.60	0.49	0.94	4.18	0.51	0.18	3.82	1.10
2	2.66	9.20	1.13	2.80	1.47	0.04	0.63	3.37	0.62	3.22	7.54	1.02
3	2.26	7.75	1.05	2.35	1.36	1.78E	0.59	2.84	0.69	1.09	1.98	0.99
4	1.85E	5.23	0.97	2.23	1.30	0.95	0.51	2.45	0.55	0.57	1.57	0.88
5	1.60E	4.35	0.95	7.98	1.18	1.55	277.91	2.18	0.52	0.43	1.34	0.81
6	1.47E	3.72	0.95	7.69	1.07	1.17	41.82	1.86	2.08	0.37	1.13	0.84
7	1.33	3.38	0.93	5.48	0.97	0.78	43.19	1.51	0.79	0.38	0.92	3.55
8	1.26	4.96	0.90	4.58	2.89	0.90	17.62	1.76	0.55	0.39	0.86	3.04
9	1.20	9.24	0.86	3.93	3.13	0.80	10.67	4.49	0.44	0.30	0.81	2.25
10	1.10	5.39	0.76	4.10	4.83	0.65	48.58	3.14	0.40	0.28	0.75	2.58
11	1.07	4.65	0.70	3.32	6.17	0.52	15.91	1.66	0.37	0.28	0.74	6.58
12	0.90	4.00	0.70E	2.95	3.65	0.60	9.82	1.25	0.38	0.28	0.70	4.48
13	0.70	3.38E	0.70	2.72	2.91	1.59	6.61	1.05	0.35	0.25	0.67	3.72
14	0.70	3.01E	0.70E	2.51	2.46	0.81	4.73	0.92	0.31	0.30	0.84	3.44
15	0.68	2.66E	0.67	2.85	2.06	1.04	3.69	0.84	0.31	0.25	0.67	3.02
16	0.70	2.35E	0.67	2.35	1.77	0.80	2.93	0.81	0.30	0.24	0.63	2.46
17	1.24	2.15	0.70	2.10	1.56	0.58	2.96	0.79	0.55	0.23	0.68	2.15
18	11.78	1.98	0.70	3.37	1.94	0.55	2.54	0.94	0.47	0.20	0.72	2.10
19	4.45	1.77	0.70	3.37	2.00	0.54	2.44	14.29	0.32	0.20	6.77	1.98
20	3.07	1.60	0.82E	2.59	1.40	0.44	15.05	4.09	0.32	1.46	3.52	1.77E
21	2.94	1.53	0.89E	2.56	1.13	0.35	6.19	2.42	0.30	1.13	2.38	1.60
22	3.20	1.56	0.72	2.77	1.04	0.32	32.92	1.81	0.26	0.47	2.08	1.47
23	3.95	1.64	0.67E	2.92	0.99	11.19	12.85	1.47	0.27	0.35	2.24	1.36
24	3.95	1.60	3.45E	2.78	0.89	3.77	7.52	1.24	0.36	0.33	2.19	1.28
25	3.20	1.47	11.57E	2.40	1.26	3.57	5.39	1.10	0.36	0.33	1.89	1.19
26	2.52	1.36	6.49E	2.20	1.05	2.09	4.02	0.95	0.29	0.33	1.61	1.30
27	2.02	1.27	4.52	2.02	0.72	1.52	64.29	0.78	0.28	0.35	1.43	1.13
28	2.28	1.18	3.65	2.29	0.66	1.13	17.74	0.67	0.32	0.33	1.36	1.02
29	9.22	3.31	1.99	0.59	0.89	0.89	9.37	0.62	0.27	0.28	1.30	1.20
30	33.51E	2.90E	1.74	0.51	0.80	0.80	7.09	0.59	0.22	0.28	1.23	1.65
31	21.55	2.56	0.46	0.46	0.46	0.46	5.55	0.54	0.28	0.28	3.14	3.14
MEAN	4.233	3.738	1.852	3.181	1.775	1.540	22.001	2.148	0.459	0.495	1.812	2.099
INCHES	1.215	0.969	0.532	0.884	0.510	0.428	6.317	0.617	0.128	0.142	0.504	0.603
STA AV	1.477	1.631	2.429	1.922	1.194	0.823	0.610	0.201	0.127	0.185	0.349	0.796

NOTES: To convert CFS to IN/DAY, multiply by 0.0092614. STA AV based on 32 yr period.

1969	SELECTED RUNOFF EVENT			COSHOCTON, OHIO WATERSHED 95							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7 - 8, 1969											
	RG 000039			RG 000039							
7- 7	0.15	0.060	7- 7	910	0.0	0.0	7- 7	850	17.20	0.0	
				926	0.3375	0.09		914	18.70	0.0028	
				936	0.2401	0.13		930	20.40	0.0048	
				943	1.7143	0.33		942	23.00	0.0065	
				1003	0.6600	0.55		948	27.70	0.0075	
WATERSHED CONDITIONS:											
Cover of 15%, cropland; 55%,				1028	0.1200	0.60		954	33.00	0.0087	
grassland; 26%, woodland; 4%,								958	38.90	0.0096	
miscellaneous; watershed in								1000	45.40	0.0102	
improved practice.								1004	54.00	0.0115	
								1008	68.70	0.0131	
								1012	84.00	0.0151	
								1014	104.00	0.0162	
								1016	124.00	0.0177	
								1020	138.00	0.0211	
								1024	153.00	0.0248	
								1032	174.00	0.0332	
								1036	192.00	0.0379	
								1050	220.00	0.0565	
								1056	249.00	0.0653	
								1106	274.00	0.0822	
								1112	274.00	0.0929	
								1120	249.00	0.1063	
								1130	217.00	0.1214	
								1138	188.00	0.1318	
								1142	170.00	0.1364	
								1150	148.00	0.1445	
								1156	138.00	0.1499	
								1200	124.00	0.1535	
								1218	99.00	0.1663	
								1230	88.00	0.1736	
								1244	78.00	0.1810	
								1310	67.00	0.1931	
								1350	54.80	0.2088	
								1430	48.20	0.2221	
								1516	42.70	0.2355	
								1554	38.90	0.2455	
								1700	35.30	0.2613	
								1806	33.00	0.2758	
								1910	30.90	0.2889	
								2110	27.70	0.3115	
								2330	24.90	0.3352	
								2400	24.40	0.3400	
							7- 8	300	22.10	0.3669	
								540	20.40	0.3887	
								800	19.60	0.4067	
								930	18.70	0.4178	
								1200	17.20	0.4351	



EVENT OF JULY 7 - 8, 1969
COSHOCTON, OHIO WATERSHED 95

COSHOCTON, OHIO WATERSHED 97

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Little Mill Creek, Walhonding River, Muskingum River Basin.

AREA: 4580.00 acres 7.16 sq. miles

SOILS: (Revision) Coshocton-Rayne silt loams - 44 percent; Rayne silt loam - 10 percent; Dekalb channery sandy loam - 8 percent; Keene silt loam - 7 percent; Orrville silt loam - 6 percent; Rayne-Dekalb complex - 6 percent; Berks shaly silt loam - 5 percent; Clarksburg silt loam - 5 percent; Chagrin silt loam - 2 percent; Coshocton silt loam - 2 percent; Dekalb extremely stony sandy loam - 1 percent; Glenford silt loam - 1 percent; stony colluvial land, Dekalb soil materials - 1 percent; strip mine spoil, sandstone materials - 1 percent; strip mine spoil, shale materials - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO		WATERSHED 97	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	2.47	0.75	1.56	2.14	2.67	5.21	11.82	2.35	1.19	2.20	3.02	2.71	38.11			
	Q	1.123	0.860	0.492	0.782	0.498	0.364	6.215	0.503	0.096	0.103	0.399	0.516	11.951			
STA AV	P	2.97	2.37	3.46	3.42	3.73	4.19	4.46	2.79	2.47	2.19	2.51	2.37	36.93			
	Q	1.719	1.599	2.400	1.966	1.204	0.899	0.639	0.215	0.126	0.164	0.336	0.820	12.088			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days			
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.		
1969		7- 5	0.582	7- 5	0.535	7- 5	0.921	7- 5	2.235	7- 5	2.646	7- 5	2.966	7- 5	3.242		
								7- 5	4.350								
MAXIMUMS FOR PERIOD OF RECORD																	
		6-28	0.720	6-28	0.660	6-28	1.150	7- 5	2.235	7- 5	2.646	1-21	3.240	1-20	3.540		
		1957		1957		1957		1969		1969		1959		1959	1937		

NOTES: Watershed conditions: Cover of 18% cropland, 50% grassland, 28% woodland, 4% miscellaneous, improved practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 26.34-5. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.36-1 and 26.37-2. Precipitation data from rain gages 27, 54, 56 and 91. Precipitation and runoff records began Jan. 1937. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 97	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	1.51	0.0			
2	0.0	0.01M	0.0	0.05E	0.0	1.16	0.0	0.0	0.15	1.28	0.17	0.0			
3	0.0	0.02M	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.07	0.0			
4	0.0	0.0	0.0	0.07	0.0	0.0	0.27	0.0	0.0	0.0	0.04	0.0			
5	0.0	0.0	0.0	0.59	0.0	0.26	5.09E	0.05E	0.04E	0.0	0.0	0.0			
6	0.02S	0.08S	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.0			
7	0.03S	0.0	0.0	0.0	0.0	0.0	0.69E	0.0	0.0	0.09	0.0	0.65			
8	0.04	0.51	0.0	0.0	1.10	0.12	0.0	0.20	0.0	0.0	0.0	0.0			
9	0.11	0.03M	0.0	0.04E	0.22	0.0	0.0	0.85E	0.0	0.0	0.0	0.0			
10	0.0	0.0	0.05S	0.13	0.53	0.0	0.78E	0.0	0.0	0.0	0.0	0.38			
11	0.0	0.0	0.06S	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.11M			
12	0.0	0.07S	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	0.02E	0.0			
13	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.04	0.12M	0.03S			
14	0.0	0.0	0.0	0.0	0.0	0.22E	0.0	0.0	0.0	0.06	0.08E	0.07S			
15	0.0	0.0	0.0	0.20	0.0	0.14E	0.0	0.0	0.0	0.0	0.0	0.02S			
16	0.04E	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0			
17	0.44	0.0	0.0	0.0	0.05E	0.0	0.07E	0.05E	0.31	0.0	0.05E	0.0			
18	0.35	0.0	0.0	0.50	0.27	0.04	0.0	0.03	0.0	0.0	0.05E	0.01M			
19	0.0	0.0	0.0	0.0	0.06	0.0	0.51	1.18	0.0	0.0	0.71S	0.0			
20	0.09	0.0	0.17	0.0	0.01	0.0	1.42	0.0	0.0	0.70	0.0	0.0			
21	0.0	0.0	0.0	0.12	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.27S			
22	0.0	0.0	0.0	0.10	0.0	0.07	0.61	0.0	0.0	0.0	0.0	0.11S			
23	0.0	0.0	0.0	0.09	0.0	1.46	0.04	0.0	0.0	0.0	0.18	0.08S			
24	0.0	0.0	1.03	0.0	0.0	0.44	0.0	0.0	0.10	0.0	0.0	0.0			
25	0.0	0.0	0.14	0.0	0.37	0.0	0.0	0.0	0.0	0.0	0.0	0.12S			
26	0.0	0.02S	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
27	0.0	0.0	0.0	0.0	0.0	0.0	1.95	0.0	0.03E	0.03E	0.0	0.0			
28	0.32	0.0	0.04M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29	0.52	0.04M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S			
30	0.50	0.0	0.0	0.0	0.0	0.32	0.32	0.0	0.0	0.0	0.0	0.30S			
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S			
TOTAL	2.47	0.75	1.56	2.14	2.67	5.21	11.82	2.35	1.19	2.20	3.02	2.71			
STA AV	2.97	2.37	3.46	3.42	3.73	4.19	4.46	2.79	2.47	2.19	2.51	2.37			

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gages 27, 54, 56 and 91. STA AV based on 33 yr period.

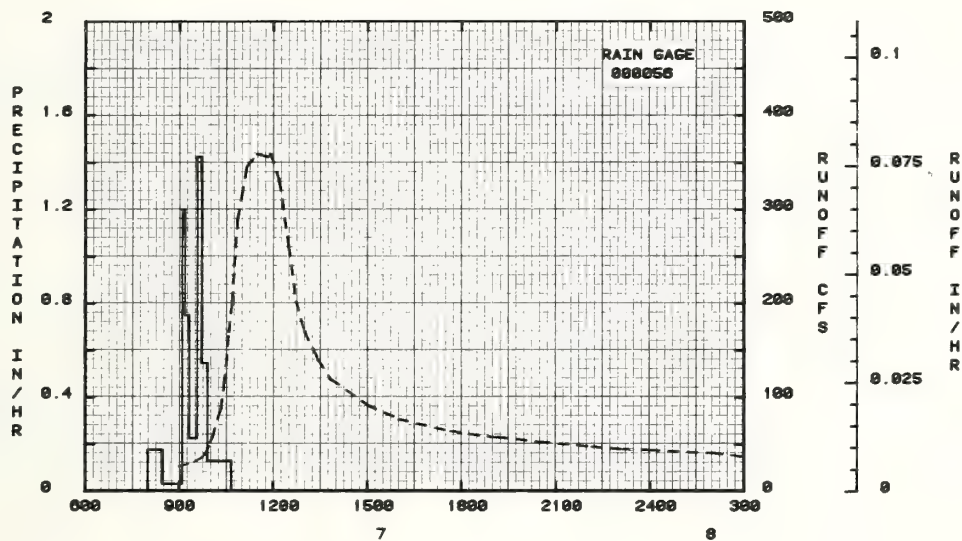
1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 97												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	4.35	20.69	1.98	3.90	2.49	0.73	1.62	6.65	0.77	0.23	3.99	1.61
2	4.20	13.46	1.90	4.54	2.26	6.36	1.00	5.32	0.86	3.89	11.71	1.54
3	3.65	11.26	1.85	3.78	2.02	3.15	0.89	4.21	1.08	1.69	2.97	1.54
4	2.92E	8.32	1.81E	3.55	1.90	1.72	0.78	3.51	0.81	0.76	2.17	1.38
5	2.49E	6.38	1.73	11.38	1.77	2.05	549.69	3.25	0.79	0.56	1.82	1.21
6	2.35E	5.90	1.69	11.79	1.69	1.89	72.97	2.82	2.61	0.47	1.55	1.18
7	2.07	5.47	1.61	8.32	1.58	1.32	76.83	2.21	1.19	0.45	1.34	4.74
8	1.94	7.51	1.54	7.03	5.16	1.36	29.87	2.70	0.90	0.42	1.28	4.95
9	1.89	14.53	1.51	6.25	6.26	1.20	16.19	6.38	0.75	0.40	1.22	3.32
10	1.65	8.44	1.47	6.43	8.64	0.91	59.95	5.44	0.63	0.38	1.15	3.65
11	1.47	7.22	1.44	5.39	11.75	0.83	22.11	2.72	0.55	0.36	1.15	10.05
12	1.34	6.26	1.37	4.62	6.77	0.75	13.03	1.98	0.49	0.35	1.10	7.00
13	1.19	5.39	1.31	4.19	5.07	2.41	8.66	1.69	0.44	0.33	0.95	5.81E
14	1.04	4.82	1.24	3.89	4.19	1.24	6.66	1.51	0.41	0.38	1.24	5.39
15	1.02	4.27E	1.21	4.51	3.42	1.59	5.27	1.37	0.37	0.36	0.94	4.67
16	1.13	3.85E	1.21	3.81	3.06	1.33	4.41	1.31	0.36	0.34	0.90	3.73
17	1.89	3.57E	1.21	3.34	2.83	0.90	3.94	1.28	0.61	0.32	0.90	3.26E
18	20.46	3.32	1.21	5.34	3.27	0.86	3.50	1.22	0.68	0.28	0.99	3.09E
19	7.53	2.97	1.18	5.70	3.27	0.87	4.36	19.27	0.40	0.27	9.08	2.86
20	4.76	2.69	1.28	4.32	2.46	0.68	40.30	5.70	0.36	1.33	5.28	2.59E
21	5.09	2.54	1.52	4.17	1.93	0.55	12.55	3.23	0.35	2.02	3.39	2.40E
22	5.31E	2.59	1.22	4.40	1.76	0.49	35.91	2.35	0.31	0.69	2.97	2.25E
23	4.81E	2.69	1.12	4.58	1.73	16.29	17.42	1.82	0.30	0.48	2.95	2.15E
24	4.50E	2.59	4.96	4.51	1.55	5.09	9.81	1.58	0.41	0.41	3.06	1.98
25	4.20E	2.40	18.28	3.91	2.07	5.87	7.30	1.47	0.48	0.40	2.59	1.82
26	3.78E	2.25	10.09	3.57	1.82	3.19	5.52	1.27	0.37	0.41	2.35	1.98
27	3.27E	2.11	7.47	3.20	1.38	2.26	115.32	1.10	0.31	0.44	2.15	1.74
28	3.70	2.02	6.09	3.73	1.16	1.64	33.71	0.99	0.35	0.41	1.98	1.61
29	13.64		5.65	3.34	1.00	1.32	15.09	0.92	0.31	0.36	1.81	1.89
30	59.58		4.69	2.91	0.86	1.23	11.74	0.83	0.25	0.34	1.73	2.69
31	38.93		3.94		0.76		9.26	0.77		0.32		5.21
MEAN	6.972	5.912	3.057	5.014	3.092	2.336	38.575	3.125	0.616	0.639	2.556	3.203
INCHES	1.123	0.860	0.492	0.782	0.498	0.364	6.215	0.503	0.096	0.103	0.399	0.516
STA AV	1.719	1.599	2.400	1.966	1.204	0.899	0.639	0.215	0.126	0.164	0.336	0.820

NOTES: To convert CFS to IN/DAY, multiply by 0.0051958. STA AV based on 33 yr period.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 97		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7 - 8, 1969											
7- 7	RG 000056		7- 7	EG 000056			7- 7	900	27.000	0.0	
	0.0	0.058		800	0.0	0.0		930	31.200	0.0032	
				827	0.1778	0.08		950	38.700	0.0057	
				906	0.0308	0.10		1000	52.500	0.0074	
				911	1.1999	0.20		1004	57.500	0.0082	
				919	0.7500	0.30					
WATERSHED CONDITIONS:				935	0.2250	0.36		1020	87.800	0.0124	
Cover of 18%, cropland; 50%,				943	1.4250	0.55		1026	114.000	0.0145	
grassland; 28%, woodland;				954	0.5455	0.65		1030	135.000	0.0164	
4%, miscellaneous; watershed				1040	0.1304	0.75		1036	170.000	0.0196	
in improved practice.								1042	202.000	0.0237	
								1046	240.000	0.0269	
								1052	290.000	0.0325	
								1100	314.000	0.0414	
								1110	346.000	0.0531	
								1130	359.000	0.0787	
								1150	356.000	0.1044	
								1156	359.000	0.1120	
								1212	330.000	0.1321	
								1230	260.000	0.1513	
								1244	202.000	0.1628	
								1300	170.000	0.1737	
								1326	140.000	0.1881	
								1350	119.000	0.1994	
								1500	91.500	0.2260	
								1600	76.600	0.2442	
								1740	63.700	0.2695	
								1900	57.500	0.2870	
								1910	57.500	0.2890	
								2030	52.500	0.3049	
								2210	47.400	0.3229	
								2310	44.900	0.3329	
								2400	43.900	0.3409	
								200	40.700	0.3592	
								500	36.600	0.3843	
								800	32.800	0.4068	

1969			SELECTED RUNOFF EVENT				COSHOCTON, OHIO WATERSHED 97			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7 - 8, 1969 (CONTINUED)										
							7- 8	1000	31.200	0.4207
								1200	29.500	0.4338

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00021654.



EVENT OF JULY 7 - 8, 1969
COSHOCTON, OHIO WATERSHED 97

COSHOCTON, OHIO WATERSHED 174

LOCATION: Coshocton Co., Ohio; 10 mi. NE of Coshocton; Tuscarawas River, Muskingum River Basin.

AREA: 52.80 acres

SOILS: (Revision) Keene silt loam - 23 percent; Bayne silt loam - 22 percent; Coshocton-Bayne silt loams - 22 percent; Dekalb channery sandy loam - 8 percent; Coshocton silt loam - 8 percent; Berks shaly silt loam - 7 percent; Bayne-Dekalb complex - 6 percent; Glenford silt loam - 2 percent; Clarksburg silt loam - 2 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 174														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual														
1969	P	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67	36.33														
	Q	0.959	0.483	0.243	0.383	0.330	0.248	4.829	0.125	0.023	0.036	0.161	0.309	8.131														
STA AV	P	2.32	2.09	3.67	3.26	3.20	2.99	4.26	2.61	2.35	1.73	2.57	2.30	33.35														
	Q	0.770	1.070	2.369	1.384	0.681	0.299	0.581	0.093	0.050	0.070	0.154	0.387	7.909														
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																												
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days										
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.									
1969		7- 5	1.085	7- 5	0.626	7- 5	0.982	7- 5	1.802	7- 5	2.154	7- 5	2.365	7- 4	2.492	7- 4	3.113											
MAXIMUMS FOR PERIOD OF RECORD																												
		7- 5	1.085	4-25	0.820	4-25	1.110	7- 5	1.802	7- 5	2.154	7- 5	2.365	3- 9	2.540	3- 4	3.710											
		1969		1961		1961		1969		1969		1969		1969		1964		1964										

NOTES: Watershed conditions: Cover of 15% hardwoods, 2% reforested, 67% grassland, 16% miscellaneous, prevailing practice on 86% of the area. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1960-61, USDA Misc. Pub. 994, p. 26.30-4. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.38-1 and 26.30-3. Precipitation data from rain gage 107. Precipitation and runoff records began June 1960. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)														COSHOCTON, OHIO WATERSHED 174													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	1.37	0.0															
2	0.0	0.02S	0.0	0.13	0.0	0.87	0.0	0.0	0.12E	1.22	0.29	0.0															
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.04E	0.0															
4	0.0	0.0	0.0	0.07	0.0	0.0	0.36	0.0	0.0	0.0	0.04E	0.0															
5	0.0	0.0	0.0	0.52	0.0	0.14	4.70	0.0	0.22	0.0	0.0	0.0															
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0															
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.10	0.0	0.60															
8	0.05E	0.44	0.0	0.0	1.50	0.12	0.0	0.15	0.0	0.0	0.0	0.02															
9	0.12	0.03M	0.0	0.05E	0.21	0.0	0.0	0.88	0.0	0.0	0.0	0.0															
10	0.0	0.0	0.04S	0.10	0.40	0.0	0.40	0.0	0.0	0.0	0.0	0.39															
11	0.0	0.0	0.04S	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.10M															
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0															
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.05	0.10M	0.03S															
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10M	0.07S															
15	0.0	0.0	0.0	0.19	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.02S															
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
17	0.35	0.0	0.0	0.0	0.05E	0.0	0.06E	0.04E	0.32	0.0	0.04E	0.0															
18	0.30	0.0	0.0	0.54	0.35	0.05E	0.0	0.0	0.0	0.0	0.04E	0.0															
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.50	0.58	0.0	0.0	0.66S	0.0															
20	0.08	0.0	0.15	0.0	0.0	0.0	1.48	0.0	0.0	0.70	0.0	0.0															
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S															
22	0.0	0.0	0.0	0.15	0.0	0.10	0.06	0.0	0.0	0.0	0.0	0.11S															
23	0.0	0.0	0.0	0.09	0.0	1.67	0.0	0.0	0.0	0.0	0.20	0.08S															
24	0.0	0.0	0.80	0.0	0.0	0.39	0.0	0.0	0.13	0.0	0.0	0.0															
25	0.0	0.0	0.10	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S															
26	0.0	0.02S	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
27	0.0	0.0	0.0	0.0	0.0	0.0	2.59	0.0	0.02E	0.03E	0.0	0.0															
28	0.30	0.0	0.03S	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
29	0.43	0.0	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S															
30	0.47	0.0	0.0	0.0	0.0	0.45	0.25	0.0	0.0	0.0	0.0	0.30S															
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	0.0															
TOTAL	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67															
STA AV	2.32	2.09	3.67	3.26	3.20	2.99	4.26	2.61	2.35	1.73	2.57	2.30															

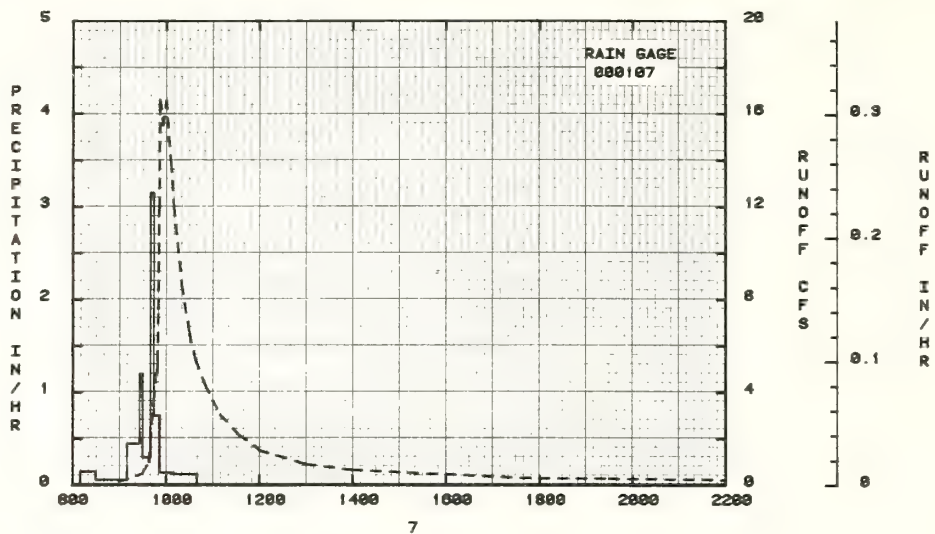
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 107. STA AV based on 10 yr period, part-year records included.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 174												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.017	0.159	0.010	0.019	0.006	0.007	0.013	0.019	0.0	0.0	0.070	0.002
2	0.015	0.116	0.010	0.027	0.005	0.067	0.0	0.013	0.0	0.047	0.086	0.002
3	0.011	0.085	0.010	0.019	0.005	0.005	0.0 T	0.010	0.0	0.006	0.007	0.002
4	0.010	0.047	0.007	0.018	0.004E	0.001	0.002	0.010	0.0	0.002	0.003	0.001
5	0.010	0.033	0.005	0.166	0.002	0.0 T	5.232	0.008	0.0 T	0.001	0.002E	0.001
6	0.010	0.027	0.005	0.078	0.002	0.0 T	0.307	0.006	0.039E	0.0 T	0.002E	0.001
7	0.008	0.027	0.005	0.050	0.002	0.0	0.843	0.005	0.001	0.0	0.002E	0.051
8	0.006	0.121	0.005	0.039	0.162	0.0	0.150	0.007	0.0	0.0	0.001E	0.024
9	0.005	0.141	0.004	0.033	0.089	0.0	0.088	0.096	0.0	0.0	0.001E	0.010
10	0.004	0.048	0.003	0.039	0.139	0.0	0.242	0.026	0.0 T	0.0	0.001	0.051E
11	0.003	0.040	0.002	0.024	0.099	0.0	0.051	0.005	0.001	0.0	0.001	0.125E
12	0.002	0.033	0.002	0.019	0.046	0.022	0.031	0.003	0.0 T	0.0	0.001	0.079E
13	0.002	0.024	0.002	0.017	0.030	0.017	0.019	0.003	0.0	0.0	0.001	0.055E
14	0.003	0.017	0.002	0.017	0.022	0.001	0.011	0.002	0.0	0.0 T	0.001	0.039E
15	0.005	0.013	0.002	0.019	0.015	0.011	0.010	0.002	0.0 T	0.0	0.001	0.027E
16	0.005	0.013	0.002	0.015	0.011	0.001	0.010	0.001	0.0 T	0.0	0.001	0.015
17	0.050	0.011	0.002	0.013	0.010	0.0	0.010	0.001	0.001E	0.0	0.002	0.010
18	0.305	0.010	0.002	0.040	0.021	0.0	0.011	0.001	0.001E	0.0	0.006	0.010
19	0.043	0.010	0.002	0.038	0.016	0.0	0.030	0.045	0.001E	0.0	0.098	0.010
20	0.025	0.010	0.003	0.019	0.007	0.0	0.744	0.006	0.001E	0.013	0.018	0.010
21	0.042	0.010	0.003	0.017	0.005	0.0	0.061	0.001	0.0 T	0.009	0.006	0.010
22	0.039	0.010	0.002	0.017	0.004	0.0	0.042	0.001	0.0 E	0.001	0.005	0.010
23	0.056	0.010	0.002	0.020	0.003	0.296	0.028	0.0 T	0.0	0.0	0.005	0.008
24	0.056	0.010	0.073	0.020	0.002	0.067	0.019	0.0 T	0.0	0.0	0.011	0.007
25	0.026	0.011	0.145	0.013	0.014	0.025	0.015	0.001	0.0 T	0.0	0.005	0.007
26	0.011	0.013	0.074	0.013	0.004	0.007	0.013	0.0 T	0.001	0.0	0.004	0.007
27	0.010	0.011	0.047	0.011	0.002	0.004	2.291	0.0	0.0 T	0.0	0.003	0.007
28	0.030	0.010	0.033	0.011	0.002	0.002	0.244	0.0	0.0	0.0	0.003	0.006
29	0.222		0.027	0.010	0.0 T	0.001	0.077	0.0	0.0	0.0	0.003	0.006
30	0.785		0.024	0.008	0.0	0.013	0.079	0.0	0.0	0.0	0.003	0.012
31	0.309		0.021		0.0		0.039	0.0		0.0		0.078
MEAN	0.0687	0.0383	0.0174	0.0283	0.0236	0.0184	0.3456	0.0089	0.0017	0.0026	0.0119	0.0221
INCHES	0.959	0.483	0.243	0.383	0.330	0.248	4.829	0.125	0.023	0.036	0.161	0.309
STA AV	0.770	1.070	2.369	1.384	0.681	0.299	0.581	0.093	0.050	0.070	0.154	0.387

NOTES: To convert CFS to IN/DAY, multiply by 0.45079. STA AV based on 10 yr period, part-year records included.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 174		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
7- 7	RG 000107		7- 7	RG 000107			7- 7				
	0.0	0.020		810	0.0	0.0		900	0.150	0.0	
				830	0.1500	0.05		930	0.510	0.0031	
				910	0.0600	0.09		938	1.000	0.0050	
				926	0.4500	0.21		940	1.840	0.0058	
				930	1.2000	0.29		942	2.650	0.0073	
WATERSHED CONDITIONS:											
Cover of 15%, hardwoods; 2%,											
reforested; 67%, grassland;											
16%, miscellaneous; watershed											
in prevailing practice.											
				940	0.3000	0.34		944	3.640	0.0091	
				944	3.1499	0.55		948	4.850	0.0144	
				952	0.7500	0.65		949	5.380	0.0163	
				1010	0.1333	0.69		950	7.600	0.0182	
				1040	0.1200	0.75		951	12.000	0.0211	
								952	16.600	0.0253	
								956	15.500	0.0453	
								1000	16.600	0.0665	
								1006	13.900	0.0945	
								1010	12.000	0.1107	
								1020	8.620	0.1432	
								1030	6.530	0.1671	
								1038	5.380	0.1820	
								1050	4.340	0.2002	
								1100	3.640	0.2128	
								1110	3.020	0.2231	
								1134	2.160	0.2427	
								1154	1.700	0.2547	
								1200	1.500	0.2578	
								1300	0.900	0.2804	
								1400	0.650	0.2950	
								1800	0.290	0.3306	
								1930	0.290	0.3389	
								2130	0.250	0.3492	
								2400	0.210	0.3601	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01878295.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 174

COSHOCTON, OHIO WATERSHED 194

LOCATION: Coshocton Co., Ohio 10 mi. NE of Coshocton; Tuscarawas River, Muskingum River Basin.

AREA: 187.00 acres

SOILS: (Revision) Coshocton-Rayne silt loams - 33 percent; Keene silt loam - 12 percent; Rayne silt loam - 12 percent; Rayne-Dekalb complex - 11 percent; Berks shaly silt loam - 10 percent; Glenford silt loam - 8 percent; Coshocton silt loam - 5 percent; Clarksburg silt loam - 4 percent; Dekalb channery sandy loam - 4 percent; stony colluvial land, Dekalb soil materials - 1 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.M., Harrold, L.L. and McGuinness, J. L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 194															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67	36.33															
	Q	1.436	1.067	0.564	1.042	1.002	0.529	5.640	0.504	0.150	0.197	0.504	0.634	13.269															
STA AV	P	2.38	2.20	3.40	3.09	3.17	2.99	4.26	2.61	2.35	1.73	2.57	2.30	33.04															
	Q	1.246	1.593	3.221	2.120	1.367	0.596	0.766	0.166	0.110	0.160	0.309	0.686	12.341															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge								Maximum Volume for Selected Time Interval																			
		Date	Date	1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days													
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		7- 5	0.959	7- 5	0.558	7- 5	0.840	7- 5	1.620	7- 5	1.979	7- 5	2.269	7- 5	2.522	7- 5	3.474												
MAXIMUMS FOR PERIOD OF RECORD																													
		7- 5	0.959	4-25	0.680	4-25	0.930	7- 5	1.620	7- 5	1.979	7- 5	2.269	3- 9	2.600	3- 4	3.890												
		1969		1961		1961		1969		1969		1969		1964		1964													

NOTES: Watershed conditions: Cover of 21% hardwoods, 2% reforested, 58% grassland, 11% cultivated, 8% miscellaneous, prevailing practice. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1960-61, USDA Misc. Pub. 994, p. 26.30-4. For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.39-1 and 26.30-3. Precipitation data from rain gage 107. Precipitation and runoff records began Jan. 1960. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													
COSHOCTON, OHIO WATERSHED 194													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	1.37	0.0	
2	0.0	0.02S	0.0	0.13	0.0	0.87	0.0	0.0	0.12E	1.22	0.29	0.0	
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.04E	0.0	
4	0.0	0.0	0.0	0.07	0.0	0.0	0.36	0.0	0.0	0.0	0.04E	0.0	
5	0.0	0.0	0.0	0.52	0.0	0.14	4.70	0.0	0.22	0.0	0.0	0.0	
6	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.10	0.0	0.60	
8	0.05E	0.44	0.0	0.0	1.50	0.12	0.0	0.15	0.0	0.0	0.0	0.02	
9	0.12	0.03H	0.0	0.05E	0.21	0.0	0.0	0.88	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.04S	0.10	0.40	0.0	0.40	0.0	0.0	0.0	0.0	0.39	
11	0.0	0.0	0.04S	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.10H	
12	0.0	0.05S	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.05	0.10H	0.03S	
14	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.07	0.10H	0.07S	
15	0.0	0.0	0.0	0.19	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.02S	
16	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.35	0.0	0.0	0.0	0.05E	0.0	0.06E	0.04E	0.32	0.0	0.04E	0.0	
18	0.30	0.0	0.0	0.54	0.35	0.05E	0.0	0.0	0.0	0.0	0.04E	0.0	
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.50	0.58	0.0	0.0	0.66S	0.0	
20	0.08	0.0	0.15	0.0	0.0	0.0	1.48	0.0	0.0	0.70	0.0	0.0	
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S	
22	0.0	0.0	0.0	0.15	0.0	0.10	0.06	0.0	0.0	0.0	0.0	0.11S	
23	0.0	0.0	0.0	0.09	0.0	1.67	0.0	0.0	0.0	0.0	0.20	0.08S	
24	0.0	0.0	0.80	0.0	0.0	0.39	0.0	0.0	0.13	0.0	0.0	0.0	
25	0.0	0.0	0.10	0.0	0.43	0.0	0.0	0.0	0.0	0.0	0.0	0.12S	
26	0.0	0.02S	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	2.59	0.0	0.02E	0.03E	0.0	0.0	
28	0.30	0.0	0.03S	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.43	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S	
30	0.47	0.0	0.0	0.0	0.0	0.45	0.25	0.0	0.0	0.0	0.0	0.30S	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	
TOTAL	2.15	0.62	1.22	2.05	3.03	5.28	11.20	1.65	1.41	2.17	2.88	2.67	
STA AV	2.38	2.20	3.40	3.09	3.17	2.99	4.26	2.61	2.35	1.73	2.57	2.30	

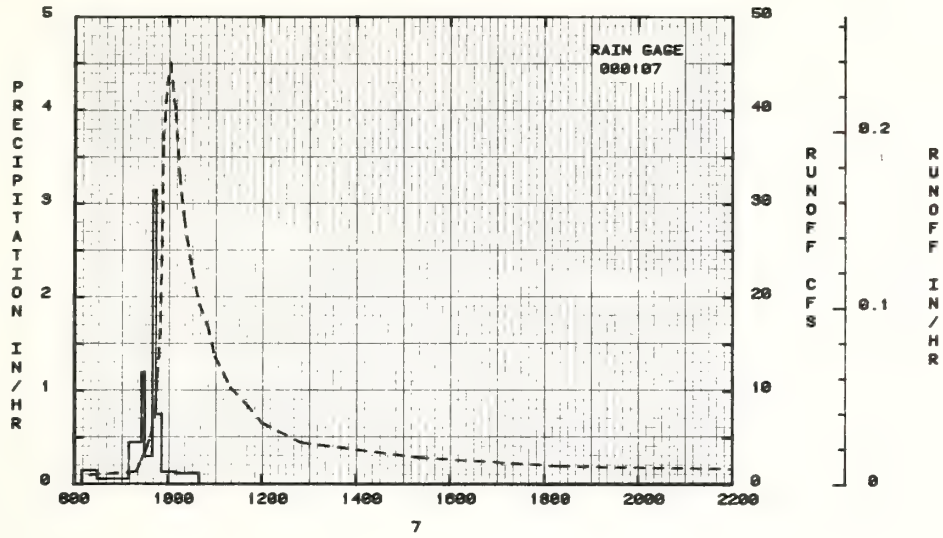
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.03S-1. Precipitation amounts are for rain gage 107. STA AV based on 10 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO WATERSHED 194						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.215	0.885	0.103	0.215	0.121	0.097	0.119	0.341	0.037	0.024	0.550	0.065
2	0.201	0.700	0.094	0.259	0.121	0.315	0.065	0.274	0.040	0.301	0.516	0.058
3	0.176E	0.558	0.086	0.201	0.121	0.126	0.066	0.229	0.037	0.061	0.116	0.058
4	0.152E	0.378	0.086	0.201	0.121	0.079	0.058	0.215	0.037	0.032	0.075	0.058
5	0.141E	0.307	0.086	0.677	0.121	0.079	17.694	0.189	0.040	0.028	0.052	0.058
6	0.141	0.274	0.086	0.544	0.121	0.072	2.160	0.152	0.188	0.028	0.047	0.058
7	0.141	0.274	0.086	0.397	0.103	0.058	3.580	0.131	0.052	0.028	0.047	0.276
8	0.131	0.588	0.086	0.359	1.149	0.065	1.172	0.154	0.047	0.028	0.042	0.188
9	0.121	0.788	0.086	0.340	0.736	0.065	0.759	0.494	0.042	0.028	0.037	0.123
10	0.121E	0.405	0.079	0.353	0.825	0.047	1.107	0.236	0.032	0.028	0.037	0.228
11	0.103E	0.359	0.065	0.289	0.934	0.037	0.566	0.131	0.028	0.028	0.037	0.443
12	0.086E	0.307	0.065	0.258	0.502	0.103	0.455	0.112	0.028	0.028	0.037	0.291
13	0.086E	0.244	0.072	0.243	0.335	0.126	0.366	0.094	0.028	0.028	0.047	0.258
14	0.086	0.201	0.065	0.243	0.244	0.057	0.306	0.079	0.028	0.028	0.052	0.258
15	0.086	0.188	0.058	0.263	0.201	0.098	0.244	0.072	0.028	0.028	0.042	0.215
16	0.086	0.188	0.065	0.215	0.188	0.056	0.201	0.072	0.032	0.028	0.042	0.176
17	0.258	0.188	0.072	0.201	0.176	0.047	0.188	0.079	0.050	0.028	0.047	0.152
18	1.324	0.176	0.072	0.339	0.240	0.052	0.176	0.079	0.042	0.028	0.047	0.152
19	0.359	0.152	0.072	0.345	0.232	0.052	0.330	0.241	0.037	0.032	0.632	0.164
20	0.258	0.141	0.093	0.244	0.164	0.047	2.524	0.082	0.037	0.301	0.162	0.142
21	0.274E	0.141	0.112	0.215	0.131	0.042	0.631	0.058	0.032	0.120	0.094	0.131
22	0.229E	0.152	0.087	0.229	0.121	0.042	0.490	0.058	0.028	0.037	0.086	0.131
23	0.215E	0.164	0.072	0.243	0.121	1.352	0.384	0.052	0.028	0.032	0.133	0.121
24	0.201E	0.152	0.329	0.215	0.121	0.293	0.297	0.047	0.028	0.028	0.122	0.121
25	0.188E	0.131	0.615	0.188	0.166	0.224	0.262	0.047	0.028	0.028	0.094	0.121
26	0.176E	0.121	0.373	0.188	0.116	0.124	0.221	0.047	0.028	0.032	0.079	0.121
27	0.152	0.112	0.289	0.176	0.087	0.094	6.760	0.042	0.028	0.037	0.072	0.112
28	0.230	0.103	0.274	0.204	0.072	0.079	1.334	0.037	0.028	0.029	0.072	0.103
29	0.974	0.258	0.188	0.065	0.072	0.065	0.680	0.037	0.028	0.021	0.072	0.133
30	2.846	0.229	0.154	0.058	0.159	0.680	0.037	0.028	0.028	0.021	0.072	0.148
31	1.522	0.215		0.058		0.434	0.037			0.021		0.311
MEAN	0.3639	0.2993	0.1429	0.2730	0.2539	0.1387	1.4294	0.1277	0.0392	0.0500	0.1321	0.1606
INCHES	1.436	1.067	0.564	1.042	1.002	0.529	5.640	0.504	0.150	0.197	0.504	0.634
STA AV	1.246	1.593	3.221	2.120	1.367	0.596	0.766	0.166	0.110	0.160	0.309	0.686

NOTES: To convert CFS to IN/DAY, multiply by 0.12728. STA AV based on 10 yr period.

1969	SELECTED RUNOFF EVENT					COSHOCTON, OHIO WATERSHED 194					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 000107			RG 000107								
7- 7	0.0	0.049	7- 7	810	0.0	0.0	7- 7	820	1.000	0.0	
				830	0.1500	0.05		920	1.390	0.0063	
				910	0.0600	0.09		926	2.590	0.0073	
				926	0.4500	0.21		932	3.750	0.0090	
				930	1.2000	0.29		938	5.180	0.0114	
WATERSHED CONDITIONS:											
21%, hardwoods; 2%, reforested				940	0.3000	0.34		944	8.020	0.0148	
58%, grassland; 11%, cultivated; 8% miscellaneous;				944	3.1499	0.55		946	11.400	0.0166	
watershed in prevailing practice.				952	0.7500	0.65		948	13.600	0.0187	
				1010	0.1333	0.69		950	17.400	0.0216	
				1040	0.1200	0.75		952	27.200	0.0253	
								953	36.800	0.0286	
								958	42.700	0.0459	
								1002	45.100	0.0614	
								1009	39.700	0.0878	
								1014	33.100	0.1036	
								1020	28.400	0.1202	
								1030	23.000	0.1431	
								1040	19.200	0.1615	
								1050	17.000	0.1776	
								1100	13.600	0.1912	
								1120	10.300	0.2122	
								1140	8.580	0.2288	
								1200	6.540	0.2423	
								1250	4.420	0.2665	
								1520	2.850	0.3147	
								1820	1.950	0.3529	
								2400	1.650	0.4070	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00530342.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 194

COSHOCTON, OHIO WATERSHED 182

LOCATION: Coshocton Co., Ohio; 10 mi NE of Coshocton, Tuscarawas River, Walhounding River, Muskingum River Basin.

AREA: 69.60 acres

SOILS: (Revision) Coshocton-Rayne silt loam - 24 percent; Dekalb channery sandy loam - 16 percent; Bayne silt loam - 15 percent; Bayne-Dekalb complex - 12 percent; Keene silt loam - 11 percent; Clarksburg silt loam - 9 percent; Glenford silt loam - 9 percent; Dekalb extremely stony sandy loam - 2 percent; Orrville silt loam - 2 percent. Revised classification from Soils of the North Appalachian Experimental Watershed, Misc. Pub. No. 1296, December 1975, Kelley, G.E., Edwards, W.H., Barrold, L.L. and McGuinness, J.L.

MONTHLY PRECIPITATION AND RUNOFF (inches)														COSHOCTON, OHIO WATERSHED 182									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	2.20	0.85	1.38	2.23	2.95	5.02	11.32	2.03	1.35	2.25	3.08	2.76	37.42									
	Q	1.520	0.889	0.321	0.629	0.521	0.219	5.684	0.440	0.025	0.025	0.198	0.437	10.908									
STA AV	P	2.58	1.85	3.66	3.27	3.58	2.59	5.10	2.46	2.61	1.83	2.83	2.74	35.09									
	Q	1.031	1.191	2.508	1.575	1.250	0.183	1.043	0.089	0.017	0.058	0.121	0.625	9.692									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval															
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		7- 5	0.966	7- 5	0.486	7- 5	0.696	7- 5	1.537	7- 5	1.832	7- 5	2.190	7- 5	2.448								
														7- 4	3.380								
MAXIMUMS FOR PERIOD OF RECORD																							
		7- 5	0.966	7- 5	0.486	7- 5	0.696	7- 5	1.537	7- 5	1.832	7- 5	2.190	3- 9	2.640								
1969		1969		1969		1969		1969		1969		1969		1964	3- 4								
														1964	3.960								

NOTES: Watershed conditions: Cover of 3% hardwoods, 9% pastured woodland, 5% reforested, 49% grassland, 34% cultivated, prevailing practice except for 10% of area which was strip cropped. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, p. 26.40-2. For Geology description, see foregoing reference, p. 26.40-1. Gage for Watershed 182 is 400 ft. upstream from that of Watershed 183 (26029), which was discontinued after 1963. For information for Watershed 183, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164 and earlier publications of this series. Precipitation data from rain gage 119. Precipitation and runoff records began January, 1964. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 182												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.46	0.0													
2	0.0	0.02S	0.0	0.15	0.0	0.82	0.0	0.0	0.16	1.14	0.29	0.0													
3	0.0	0.03S	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.05	0.0													
4	0.0	0.0	0.0	0.12	0.0	0.0	0.37	0.0	0.0	0.0	0.04E	0.0													
5	0.0	0.0	0.0	0.57E	0.0	0.15	4.62	0.0	0.15	0.0	0.0	0.0													
6	0.0	0.13S	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.0	0.0	0.0													
7	0.0	0.0	0.0	0.0	0.0	0.0	0.88	0.0	0.0	0.09	0.0	0.65													
8	0.05E	0.57	0.0	0.0	1.55	0.15	0.0	0.20	0.0	0.0	0.0	0.0													
9	0.13	0.03M	0.0	0.05E	0.23	0.0	0.0	0.95	0.0	0.0	0.0	0.0													
10	0.0	0.0	0.07S	0.08E	0.33	0.0	0.40	0.0	0.0	0.0	0.0	0.42													
11	0.0	0.0	0.07S	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.13M													
12	0.0	0.05S	0.0	0.0	0.0	0.48	0.0	0.0	0.0	0.0	0.0	0.0													
13	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.05	0.12M	0.03S													
14	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.04	0.12M	0.07S													
15	0.0	0.0	0.0	0.22	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.02S													
16	0.03E	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
17	0.44	0.0	0.0	0.0	0.05	0.0	0.14	0.06	0.38	0.0	0.05E	0.0													
18	0.26	0.0	0.0	0.51	0.32E	0.02E	0.0	0.15	0.0	0.0	0.05E	0.0													
19	0.0	0.0	0.0	0.0	0.02E	0.0	0.65	0.67	0.0	0.0	0.65S	0.0													
20	0.12	0.0	0.19	0.0	0.0	0.0	1.35	0.0	0.0	0.90	0.0	0.0													
21	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S													
22	0.0	0.0	0.0	0.15	0.0	0.10	0.04	0.0	0.0	0.0	0.0	0.11S													
23	0.0	0.0	0.0	0.10	0.0	1.41	0.0	0.0	0.0	0.0	0.25	0.08S													
24	0.0	0.0	0.85	0.0	0.0	0.40	0.0	0.0	0.07	0.0	0.0	0.0													
25	0.0	0.0	0.10	0.0	0.37E	0.0	0.0	0.0	0.0	0.0	0.0	0.12S													
26	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
27	0.0	0.0	0.0	0.0	0.0	0.0	2.53	0.0	0.02E	0.03	0.0	0.0													
28	0.32	0.0	0.05M	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
29	0.44	0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S													
30	0.41E	0.0	0.0	0.0	0.0	0.55	0.30	0.0	0.0	0.0	0.0	0.30S													
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24S	0.0													
TOTAL	2.20	0.85	1.38	2.23	2.95	5.02	11.32	2.03	1.35	2.25	3.08	2.76													
STA AV	2.58	1.85	3.66	3.27	3.58	2.59	5.10	2.46	2.61	1.83	2.83	2.74													

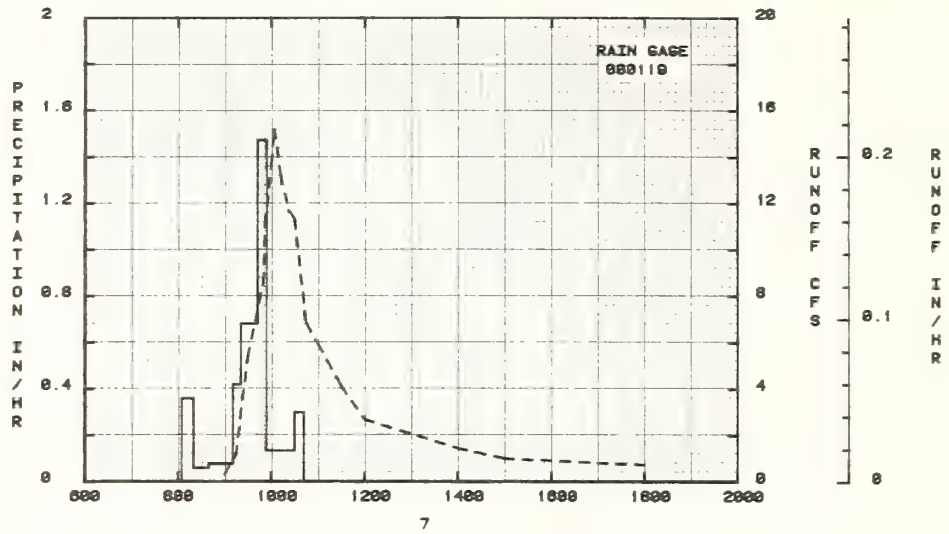
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gage 119. STA AV based on 6 yr period.

1969 MEAN DAILY DISCHARGE (cfs) COSHOCTON, OHIO WATERSHED 182												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.083E	0.297	0.027	0.039	0.027	0.010	0.017	0.215	0.001	0.0	0.073	0.010
2	0.078	0.242	0.024	0.057	0.024	0.048	0.006	0.163E	0.004	0.030	0.119	0.010
3	0.073E	0.190	0.021	0.042	0.021	0.018	0.005	0.120E	0.002	0.006	0.012	0.010
4	0.073	0.126	0.021	0.041	0.021	0.008	0.006	0.079E	0.002	0.001	0.006	0.007
5	0.073E	0.099	0.021	0.174	0.019	0.017	6.296E	0.050	0.003E	0.0	0.005	0.005
6	0.073E	0.088	0.021	0.116	0.017	0.016	0.878E	0.042	0.032E	0.0 T	0.005	0.005
7	0.078	0.083	0.019	0.088	0.015	0.005	1.446E	0.036	0.003E	0.001	0.005	0.088
8	0.078	0.184	0.017	0.083	0.211	0.006	0.367E	0.039	0.002E	0.001	0.005	0.049
9	0.073E	0.249	0.017	0.083	0.157	0.006	0.236	0.163	0.001	0.001	0.005	0.027
10	0.073E	0.131	0.017	0.087	0.177	0.004	0.364E	0.061	0.001	0.001	0.005	0.078
11	0.068E	0.106	0.015	0.069	0.162	0.003	0.206E	0.030	0.001	0.001	0.005	0.161
12	0.064	0.099	0.013	0.059	0.095	0.010	0.155E	0.027	0.001	0.002	0.005	0.085
13	0.064E	0.083	0.011	0.050	0.078	0.018	0.112E	0.027	0.001	0.002	0.005	0.059
14	0.059	0.064	0.010	0.046	0.064	0.007	0.083E	0.027	0.001	0.001	0.003	0.068
15	0.055	0.055	0.008	0.058	0.050	0.013	0.059	0.024	0.001	0.0	0.002	0.064
16	0.050E	0.050	0.008	0.050	0.042	0.007	0.047	0.021	0.002	0.0	0.002	0.050
17	0.159	0.046	0.010	0.042	0.036	0.005	0.042	0.021	0.010	0.0	0.002	0.042
18	0.571	0.046	0.010	0.080	0.048	0.005	0.035	0.024	0.002	0.0 T	0.003	0.039
19	0.101	0.042	0.010	0.085	0.046	0.004	0.060	0.062	0.0 T	0.0	0.132	0.036
20	0.067	0.036	0.014	0.050	0.033	0.002	0.753E	0.017	0.0	0.016	0.027	0.030
21	0.083	0.033	0.011	0.046	0.024	0.002	0.184E	0.008	0.0	0.006	0.015	0.027
22	0.094	0.036	0.008	0.050	0.021	0.002	0.116E	0.006	0.0	0.001	0.013	0.027
23	0.134	0.042	0.008	0.059	0.021	0.250	0.099	0.005	0.0	0.0 T	0.020	0.024
24	0.123	0.042	0.084	0.055	0.019	0.062	0.078	0.004	0.0	0.0	0.028	0.021
25	0.073	0.036	0.183	0.042	0.028	0.048	0.064	0.003	0.0	0.0	0.017	0.021
26	0.064	0.033	0.090	0.039	0.019	0.018	0.050	0.002	0.0	0.0	0.015	0.019
27	0.055	0.030	0.059	0.036	0.013	0.011	3.130E	0.002	0.0	0.0	0.013	0.017
28	0.093	0.027	0.050	0.040	0.010	0.008	0.754E	0.002	0.0	0.0	0.011	0.015
29	0.275		0.046	0.036	0.008	0.005	0.243	0.002	0.0	0.0	0.010	0.020
30	0.966		0.042	0.030	0.007	0.019	0.384	0.001	0.0	0.0	0.010	0.045
31	0.467		0.039		0.006		0.342	0.001		0.0		0.116
MEAN	0.1433	0.0929	0.0303	0.0613	0.0491	0.0213	0.5361	0.0415	0.0024	0.0024	0.0193	0.0412
INCHES	1.520	0.889	0.321	0.629	0.521	0.219	5.684	0.440	0.025	0.025	0.198	0.437
STA AV	1.031	1.191	2.508	1.575	1.250	0.183	1.343	0.089	0.017	0.058	0.121	0.625

NOTES: To convert CFS to IN/DAY, multiply by 0.34198. STA AV based on 6 yr period.

1969			SELECTED RUNOFF EVENT			COSHOCTON, OHIO			WATERSHED 182		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JULY 7, 1969											
RG 000119			RG 000119								
7- 7	0.0	0.046	7- 7	805	0.0	0.0	7- 7	900	0.320	0.0	
				820	0.3600	0.09		915	1.150	0.0026	
				840	0.0600	0.11		930	5.370	0.0142	
				911	0.0774	0.15		950	8.570	0.0472	
				921	0.4200	0.22		952	11.100	0.0516	
WATERSHED CONDITIONS:				943	0.6818	0.47	1000	13.700	0.0758		
Cover of 3%, hardwoods; 9%,				954	1.4727	0.74	1004	15.200	0.0895		
pastured woodland; 5%, re-				1030	0.1333	0.82	1012	13.200	0.1164		
forested; 49%, grassland;				1042	0.3000	0.88	1022	11.700	0.1455		
34%, miscellaneous, water-							1030	11.300	0.1679		
shed in prevailing practice.											
								1045	6.810	0.2002	
								1100	5.930	0.2229	
								1130	4.110	0.2587	
								1200	2.680	0.2829	
								1400	1.440	0.3416	
								1500	1.000	0.3590	
								1800	0.730	0.3960	

NOTES: To convert runoff in CFS TO IN/HR, multiply by 0.01424914.



COSHOCTON, OHIO WATERSHED 166

LOCATION: Coshocton County, Ohio; 10 miles NE of Coshocton; Walhonding River, Muskingum River Basin.

AREA: 79.20 acres

SLOPES: SLOPE-PERCENT 0-2 2-6 6-12 12-18 18-25 25-35
 Percent of area 4.8 4.0 23.4 40.7 23.7 3.4

SOILS: Berks shaly silt loam - 21 percent; Coshocton-Rayne silt loam - 35 percent; Dekalb channery sandy loam - 15 percent; Keene silt loam - 6 percent; Orrville silt loam - 5 percent; Rayne silt loam - 18 percent.

SERIES OR TYPE (TEXTURE)	Per- cent of area	Avg. depth (in.)	TOPSOIL		SUBSOIL		SUBSTRATUM		
			Structure	Perme- ability	Structure	Perme- ability	Avg. depth to (in.)	Perme- ability	Internal drainage
Berks shaly silt loam	21.0	5	Weak fine granular	Moderately rapid	Weak medium subangular blocky	Moderately rapid		Fractured bedrock	Well drained
Coshocton-Rayne	35.0	7	Weak medium granular	Slow	Weak fine and medium to moderate medium subangular blocky	Slow		Fractured	Moderately well drained
Dekalb channery sandy soil	15.0	6	Moderate fine to weak fine and medium subangular blocky	Rapid	Weak medium and fine to weak medium to weak coarse subangular blocky	Rapid		Fractured bedrock	Well drained
Keene silt loam	6.0	12	Weak fine to weak fine and medium subangular blocky	Slow	Weak fine and medium to moderate medium subangular blocky	Slow		Fractured bedrock	Moderately well drained
Orrville silt loam	5.0	9	Weak fine granular	Moderate	Moderate fine to moderate medium to weak medium subangular blocky	Moderate		Gravelly stratified alluvium	Somewhat poorly drained
Rayne silt loam	18.0	9	Weak fine granular	Moderate	Moderate fine and medium to weak fine and medium to weak coarse and medium subangular blocky	Moderate		Fractured bedrock	Well drained
TOTAL	100.0								

EROSION: Erosion Class + 1 2 3 4 5
 Percent of Area 0.0 9.1 90.9 0.0 0.0 0.0

LAND CAPABILITY: Class I II III IV V VI VII VIII
 Percent of Area 0.0 8.8 23.3 64.2 0.0 3.7 0.0 0.0

GEOLOGY: For Geology description and map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, pp. 26.28-1 and 26.30-3. This map for Watershed 177 is correct except that the southern boundary has been moved south slightly changing the acreage from 75.6 to 79.2.

GEOLOGY - (CONTINUED):

SYSTEM	Formation and percent of area	Description
Allegheny	Middle and lower Kittanning, coal shale, and clay Clarion clay and sandstone. 67.0	Primarily sandstone and sandy shale - more shale in the lower part of the watershed. Three-foot thick middle Kittanning coal outcrops above the lower two-thirds of the watershed. Thin limestone, coal, and clay layers in the middle and lower parts have a general dip to the southeast at an angle less than 1 percent. The Cambridge Arch peaks under the west side of this watershed.
	Upper and lower Freeport sandstone, coal, shale and clay. 33.0	
TOTAL	100.0	

SURFACE DRAINAGE: Good; length of principle waterway - 2950 feet; a natural watershed with surface flow to one main channel with no major division or tributaries; natural boundary.

CHARACTER OF FLOW: Ephemeral, continuous.

INSTRUMENTATION: Runoff: Concrete 2:1 broad crested weir, 4.5 feet deep, 2 FW-1 recorders.

WATERSHED CONDITIONS: Cover of 4 percent hardwoods; 6 percent reforested; 67 percent grassland; 17 percent cultivated; 6 percent miscellaneous; contour strip cropped.

GENERALLY REPRESENTS: Conservation practice on mixed cover areas of Berks, Coshocton, Wayne, Keene, and associated silt loams and loams with medium internal drainage, good surface drainage, moderate to severe erosion, found on rolling to steep topography in the Allegheny-Cumberland Plateau.

MONTHLY PRECIPITATION AND RUNOFF (inches)													COSHOCTON, OHIO WATERSHED 166	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1967 P	0.92	1.65	4.72	2.99	5.03	0.73	6.33	1.06	3.50	1.57	3.41	2.74	38.67	
1967 Q	0.086	0.652	3.987	0.997	2.165	0.058	0.219	0.032	0.046	0.036	0.225	1.303	9.807	
1968 P	3.61	0.43	4.82	1.66	6.25	3.06	3.88	1.16	2.18	2.19	2.76	3.43	35.45	
1968 Q	1.793	1.080	2.358	1.018	2.038	0.538	0.196	0.053	0.010	0.020	0.069	0.909	10.081	
1969 P	2.31	0.77	1.47	2.27	2.71	5.03	11.46	1.84	1.51	2.18	2.80	2.70	37.07	
1969 Q	1.154	0.981	0.381	0.669	0.324	0.281	5.328	0.355	0.058	0.079	0.212	0.316	10.138	
STA AV P	2.65	2.21	3.34	3.22	3.83	3.93	4.40	2.81	2.59	2.03	2.50	2.25	35.75	
Q	1.009	0.904	2.242	0.895	1.509	0.292	1.915	0.147	0.038	0.045	0.169	0.843	10.007	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date						
1967	3- 6 0.060	3- 6 0.054	3- 6 0.094	3- 6 0.178	3- 5 0.278	3- 5 0.534	3- 5 0.812	3- 4 1.657						
1968	7-24 0.147	1-30 0.072	1-30 0.134	1-30 0.302	1-29 0.787	1-29 1.200	1-28 2.303							
1969	7-27 0.921	7- 5 0.539	7- 5 0.866	7- 5 1.593	7- 5 1.876	7- 5 2.054	7- 5 2.249	7- 4 3.215						
MAXIMUMS FOR PERIOD OF RECORD														
	7-27 0.921	7- 5 0.539	7- 5 0.866	7- 5 1.593	7- 5 1.876	7- 5 2.054	7- 5 2.249	7- 4 3.215						
1969		1969	1969	1969	1969	1969	1969	1969						

NOTES: Watershed conditions: Same as described in previous section under WATERSHED CONDITIONS. Precipitation records began January 1940. Runoff records began January 1, 1967. Precipitation data from rain gages 100 and 103. For long-time precipitation records, see U.S. Weather Bureau records at Coshocton, Ohio.

1967	DAILY PRECIPITATION (inches)						COSHOCTON, OHIO WATERSHED 166					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.03E	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.74	0.0
2	0.0	0.45S	0.0	0.0	0.50	0.0	1.39	0.0	0.0	0.0	0.37	0.35
3	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.16E	0.0	0.0	0.29	0.21
4	0.0	0.0	0.24	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.05	0.0
5	0.0	0.16S	0.94	0.32	0.03	0.0	0.0	0.0	0.0	0.57	0.0	0.08
6	0.0	0.17S	0.65S	0.09	0.45	0.0	0.0	0.0	0.0	0.10	0.0	0.09
7	0.0	0.19S	0.19S	0.01	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.04S	0.0	0.30	0.17	0.0	0.0	0.0	0.16	0.0	0.0
9	0.0	0.0	0.0	0.14	0.05	0.0	0.0	0.0	0.96	0.0	0.0	0.0
10	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.32
11	0.0	0.0	0.0	0.0	0.79	0.0	0.30	0.0	0.0	0.0	0.38	0.41
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.08
13	0.0	0.0	0.36	0.66	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0
14	0.0	0.0	0.25	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.10S	0.04E
15	0.0	0.11	0.02	0.0	0.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.12S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.12S	0.55	0.13	0.02E	0.0	0.0	0.0	0.05	0.50	0.02
18	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0	0.36	0.0	0.16
19	0.0	0.0	0.0	0.0	0.0	0.0	0.98	0.14	0.0	0.04	0.0	0.0
20	0.0	0.15	0.47S	0.0	0.0	0.0	0.37	0.30	0.05E	0.0	0.0	0.0
21	0.0	0.0	0.18	0.45	0.0	0.13	0.0	0.0	0.17	0.0	0.04E	0.44
22	0.0	0.0	0.0	0.24	0.0	0.09	0.0	0.0	0.0	0.0	0.33	0.17
23	0.0	0.04S	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.04S	0.0	0.15	0.0	0.0	0.66E	0.0	0.0	0.03	0.14E	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.14	0.0	0.15
26	0.05	0.0	0.0	0.16	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0
27	0.58S	0.13S	0.0	0.0	0.0	0.0	0.97	0.0	0.81	0.0	0.0	0.0
28	0.04S	0.13S	1.10	0.0	0.21	0.31	0.96	0.0	1.37	0.0	0.0	0.12S
29	0.0	0.0	0.0	0.0	0.89	0.0	0.0	0.0	0.12	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.19	0.0	0.0	0.35S	0.0
31	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08S	0.0
TOTAL	0.92	1.65	4.72	2.99	5.03	0.73	6.33	1.06	3.50	1.57	3.41	2.74
STA AV	2.62	2.32	3.35	3.32	3.78	3.92	4.15	2.91	2.64	2.02	2.48	2.19

NOTES: Precipitation amounts are for rain gages 100 and 103. STA AV based on 28 yr period (1940-1967).

1968	DAILY PRECIPITATION (inches)						COSHOCTON, OHIO WATERSHED 166					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.04E	0.0	0.02	0.0	0.40	0.91	0.46	0.73	0.0	0.0	0.25
2	0.0	0.13E	0.0	0.0	0.0	0.04E	0.0	0.0	0.06	0.32	0.0	0.0
3	0.0	0.0	0.0	0.0	0.22	0.08	0.0	0.0	0.04	0.39	0.05E	0.11
4	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.51
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.0
6	0.10S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.28	0.21	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.21	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.24	0.0	0.0	0.02E	0.0
9	0.04S	0.13S	0.06E	0.0	0.15E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.07	0.10E	0.18	0.0	0.0
11	0.0	0.0	0.0	0.0	1.30	1.15	0.0	0.0	0.10	0.0	0.06	0.0
12	0.0	0.04S	0.93E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14E	0.0
13	1.37S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.36S	0.0	0.0	0.74	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.05S
15	0.64S	0.0	0.0	0.0	0.42	0.36	0.09	0.0	0.0	0.0	0.44	0.06S
16	0.0	0.0	0.30	0.0	0.25	0.26	0.23	0.0	0.0	0.0	0.41	0.0
17	0.0	0.0	0.0	0.02E	0.07	0.05	0.0	0.0	0.0	0.0	0.05	0.0
18	0.0	0.0	0.0	0.0	0.25	0.0	0.09	0.0	0.10	0.96	0.10	0.16E
19	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.20	0.0	0.0	0.23
20	0.0	0.08S	0.24	0.06E	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.67	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.79	0.0	0.0	0.25	0.13	0.0	0.0	0.03E	0.0	0.44
23	0.05S	0.0	0.18S	0.14E	0.83	0.0	0.0	0.0	0.27	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.38	0.0	2.15	0.0	0.02E	0.0	0.07E	0.0
25	0.0	0.0	0.0	0.0	0.0	0.30	0.02	0.0	0.0	0.02E	0.0	0.0
26	0.0	0.0	0.38	0.15E	0.49	0.17	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.40	0.0	0.98	0.0	0.18	0.0	0.0	0.0	0.0	0.96
28	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.96	0.66
29	0.22	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.61	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	3.61	0.43	4.82	1.66	6.25	3.06	3.88	1.16	2.18	2.19	2.76	3.43
STA AV	2.66	2.26	3.41	3.26	3.87	3.89	4.14	2.85	2.63	2.03	2.49	2.24

NOTES: For daily air temperatures for 1968, see table for Watershed W-95, p. 26.035-1 published in Hydrologic Data for Experimental Agricultural Watershed in the United States, 1968, Misc. Pub. 1330. Precipitation amounts are for rain gages 100 and 103. STA AV based on 29 yr period (1940-1968).

1969 DAILY PRECIPITATION (inches)													COSHOCTON, OHIO WATERSHED 166	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	1.09	0.0		
2	0.0	0.03S	0.0	0.16	0.0	1.00	0.0	0.0	0.14	1.26	0.51	0.0		
3	0.0	0.04S	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.05E	0.0		
4	0.0	0.0	0.0	0.10	0.0	0.0	1.47	0.0	0.0	0.0	0.04E	0.0		
5	0.0	0.0	0.0	0.57	0.0	0.14	3.73	0.02E	0.30	0.0	0.0	0.0		
6	0.0	0.07S	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.88	0.0	0.0	0.08	0.0	0.61		
8	0.05E	0.51	0.0	0.0	1.17	0.19	0.0	0.16	0.0	0.0	0.0	0.0		
9	0.11	0.04M	0.0	0.05E	0.24	0.0	0.0	0.88	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.06S	0.09	0.43	0.0	0.47	0.0	0.0	0.0	0.0	0.39		
11	0.0	0.0	0.06S	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.13M		
12	0.0	0.06S	0.0	0.0	0.0	0.52	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.07M	0.03S		
14	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.07	0.07M	0.07S		
15	0.0	0.0	0.0	0.19	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.02S		
16	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.40	0.0	0.0	0.0	0.04E	0.0	0.06E	0.04E	0.30	0.0	0.04E	0.0		
18	0.33	0.0	0.0	0.52	0.34	0.03E	0.0	0.0	0.0	0.0	0.05E	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.74	0.0	0.0	0.65S	0.0		
20	3.12	0.0	0.19	0.0	0.0	0.0	1.44	0.0	0.0	0.70	0.0	0.0		
21	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27S		
22	0.0	0.0	0.0	0.15	0.0	0.10	0.22	0.0	0.0	0.0	0.0	0.11S		
23	0.0	0.0	0.0	0.10	0.0	1.43E	0.0	0.0	0.0	0.0	0.19	0.08S		
24	0.0	0.0	0.88	0.0	0.0	0.42	0.0	0.0	0.11	0.0	0.0	0.0		
25	0.0	0.0	0.13	0.0	0.44	0.0	0.0	0.0	0.0	0.0	0.0	0.12S		
26	0.0	0.02S	0.04S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	2.41	0.0	0.02E	0.03E	0.0	0.0		
28	0.29	0.0	0.05M	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.45		0.05M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32S		
30	0.52		0.0	0.0	0.0	0.31	0.30	0.0	0.0	0.0	0.0	0.30S		
31	0.0		0.0		0.0		0.0	0.0		0.0		0.24S		
TOTAL	2.31	0.77	1.47	2.27	2.71	5.03	11.46	1.84	1.51	2.18	2.80	2.70		
STA AV	2.65	2.21	3.34	3.22	3.83	3.93	4.40	2.81	2.59	2.03	2.50	2.25		

NOTES: For daily air temperatures for the vicinity, see table for Watershed W-95, p. 26.035-1. Precipitation amounts are for rain gages 100 and 103. STA AV based on 30 yr period (1940-1969).

1967 MEAN DAILY DISCHARGE (cfs)													COSHOCTON, OHIO WATERSHED 166	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.008	0.077	0.027	0.190	0.078	0.025	0.004	0.011	0.0	0.002	0.017	0.017		
2	0.008	0.192	0.093	0.150	0.172	0.022	0.070	0.008	0.0	0.002	0.058	0.027		
3	0.006	0.136	0.297	0.129	0.100	0.019	0.010	0.009	0.0	0.002	0.027	0.313		
4	0.005	0.123	0.209	0.096	0.067	0.015	0.004	0.006	0.001	0.002	0.040	0.143		
5	0.004	0.105	1.329	0.124	0.054	0.013	0.004	0.005	0.0	0.015	0.010	0.142		
6	0.003	0.077	1.307	0.103	0.102	0.009	0.003	0.005	0.0	0.005	0.006	0.140		
7	0.005	0.067	0.684	0.115	0.495	0.008	0.002	0.004	0.001	0.005	0.005	0.130		
8	0.006	0.067	0.482	0.073	0.345	0.008	0.002	0.003	0.001	0.006	0.004	0.104		
9	0.004	0.055	0.460	0.082	0.294	0.008	0.002	0.002	0.015	0.008	0.004	0.087		
10	0.003	0.060	0.506	0.062	0.265	0.006	0.002	0.002	0.012	0.006	0.007	0.132		
11	0.003	0.060	0.432	0.050	0.823	0.005	0.003	0.004	0.010	0.004	0.027	0.380		
12	0.003	0.029	0.350	0.043	0.535	0.004	0.002	0.005	0.0	0.003	0.021	0.264		
13	0.003	0.032	0.361	0.198	0.612	0.003	0.004	0.004	0.0	0.003	0.011	0.197		
14	0.004	0.153	0.457	0.118	0.542	0.003	0.004E	0.003	0.0	0.003	0.011	0.174		
15	0.005	0.143	0.450	0.093	0.793	0.002	0.003E	0.002	0.0	0.003	0.009	0.136		
16	0.005	0.142	0.349	0.072	0.327	0.002	0.002E	0.002	0.0	0.003	0.008	0.116		
17	0.003	0.098	0.315	0.222	0.302	0.002	0.001	0.002	0.0	0.002	0.098	0.116		
18	0.001	0.082	0.255	0.112	0.241	0.002	0.004	0.003	0.0	0.007	0.044	0.151		
19	0.001	0.077	0.235	0.087	0.183	0.002	0.088	0.003	0.0	0.003	0.030	0.091		
20	0.001	0.082	0.330	0.072	0.126	0.003	0.037	0.005	0.0	0.003	0.027	0.082		
21	0.001	0.062	0.963	0.090	0.099	0.002	0.005	0.003	0.0	0.003	0.020	0.103		
22	0.002	0.054	0.477	0.261	0.077	0.004	0.003	0.002	0.0	0.003	0.035	0.376		
23	0.007	0.050	0.372	0.111	0.067	0.003	0.003	0.001	0.0	0.002	0.052	0.165		
24	0.009	0.039	0.285	0.150	0.056	0.003	0.025	0.001	0.0	0.002	0.036	0.150		
25	0.008	0.030	0.226	0.110	0.045	0.002	0.013	0.002	0.0	0.002	0.039	0.185		
26	0.008	0.021	0.173	0.112	0.034	0.002	0.004	0.002	0.0	0.003	0.027	0.117		
27	0.066	0.024	0.143	0.100	0.029	0.002	0.046	0.001	0.004	0.003	0.021	0.082		
28	0.027	0.030	0.780	0.075	0.027	0.004E	0.304	0.001	0.087	0.003	0.017	0.072		
29	0.015		0.370	0.062	0.206	0.004E	0.033	0.0	0.016	0.003	0.017	0.055		
30	0.011		0.305	0.054	0.070	0.003	0.021	0.0	0.004	0.003	0.019	0.043		
31	0.046		0.245		0.035		0.018	0.0	0.0	0.003		0.043		
MEAN	0.0092	0.0775	0.4280	0.1106	0.2323	0.0064	0.0235	0.0034	0.0051	0.0039	0.0250	0.1399		
INCHES	0.086	0.652	3.987	0.997	2.165	0.058	0.219	0.032	0.046	0.036	0.225	1.303		
STA AV	0.086	0.652	3.987	0.997	2.165	0.058	0.219	0.032	0.046	0.036	0.225	1.303		

NOTES: To convert CFS to IN/DAY, multiply by 0.300528. STA AV based on 1 yr period (1967).

1968	MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO					WATERSHED 166		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.036	0.848	0.015	0.455	0.017	0.273	0.122	0.031	0.001	0.0 T	0.001	0.018	
2	0.036	0.703	0.013	0.280	0.015	0.196	0.026	0.013	0.001	0.001	0.002	0.021	
3	0.036	0.416	0.009	0.255	0.023	0.145	0.012	0.011	0.001	0.007	0.002	0.010	
4	0.033	0.322	0.011	0.333	0.019	0.108	0.008	0.015	0.001	0.001	0.002	0.114	
5	0.020	0.251	0.015	0.227	0.013	0.086	0.006	0.009	0.001	0.001	0.002	0.031	
6	0.013	0.177	0.015	0.165	0.011	0.074	0.005	0.008	0.002	0.003	0.002	0.015	
7	0.015	0.148	0.015	0.143	0.009	0.063	0.005	0.008	0.001	0.002	0.002	0.009	
8	0.015	0.118	0.017	0.123	0.008	0.056	0.005	0.009	0.001	0.001	0.002	0.008	
9	0.013	0.098	0.027	0.104	0.011	0.044	0.004	0.012	0.001	0.001	0.002	0.006	
10	0.013	0.082	0.030	0.092	0.009	0.037	0.003	0.008	0.001	0.002	0.002	0.004	
11	0.013	0.067	0.024	0.082	0.216	0.166	0.003	0.006	0.001	0.001	0.002	0.003	
12	0.008	0.054	0.066	0.067	0.102	0.100	0.003	0.005	0.001	0.001	0.002	0.004	
13	0.041	0.040	0.079	0.058	0.043	0.043	0.003	0.005	0.001	0.001	0.002	0.006	
14	0.046	0.036	0.062	0.161	0.055	0.031	0.003	0.004	0.001	0.001	0.001	0.006	
15	0.017	0.039	0.132	0.167	0.118	0.046	0.003	0.003	0.001	0.0 T	0.004	0.005	
16	0.017	0.036	0.298	0.092	0.178	0.068	0.003	0.003	0.001	0.0	0.016	0.005	
17	0.015	0.025	0.196	0.072	0.076	0.038	0.003	0.002	0.001	0.0	0.006	0.005	
18	0.015	0.013	0.165	0.062	0.090	0.028	0.003	0.002	0.001	0.013	0.006	0.006	
19	0.015	0.013	0.147	0.054	0.093	0.019	0.003	0.002	0.001	0.007	0.008	0.050	
20	0.017	0.015	0.170	0.055	0.104	0.014	0.002	0.002	0.001	0.002	0.006	0.034	
21	0.031	0.013	0.390	0.043	0.113	0.011	0.003	0.002	0.001	0.002	0.005	0.019	
22	0.039	0.009	1.154	0.033	0.088	0.020	0.004	0.001	0.001	0.002	0.005	0.087	
23	0.046	0.008E	0.851	0.042	0.370	0.015	0.003	0.001	0.001	0.002	0.005	0.068	
24	0.039	0.008E	0.631	0.033	0.720	0.011	0.302	0.001	0.001	0.002	0.005	0.039	
25	0.033	0.005	0.423	0.030	0.349	0.030	0.049	0.002	0.001	0.002	0.004	0.033	
26	0.027	0.004	0.419	0.042	0.380	0.023	0.013	0.002	0.001	0.002	0.003	0.027	
27	0.024	0.010	0.920	0.037	1.728	0.024	0.018	0.002	0.001	0.002	0.003	0.436	
28	0.295	0.015	0.440	0.027	0.726	0.009	0.015	0.001	0.001	0.002	0.087	1.113	
29	1.395	0.015	0.365	0.024	0.485	0.008	0.008	0.001	0.001	0.001	0.027	0.360	
30	2.487		0.270	0.028	0.349	0.006	0.006	0.001	0.001	0.001	0.009	0.285	
31	1.115		0.477		0.262		0.006	0.001		0.001		0.195	
MEAN	0.1925	0.1239	0.2531	0.1129	0.2188	0.0597	0.0211	0.0057	0.0011	0.0021	0.0076	0.0976	
INCHES	1.793	1.080	2.358	1.018	2.038	0.538	0.196	0.053	0.010	0.020	0.069	0.909	
STA AV	0.940	0.866	3.173	1.008	2.101	0.298	0.208	0.042	0.028	0.028	0.147	1.106	

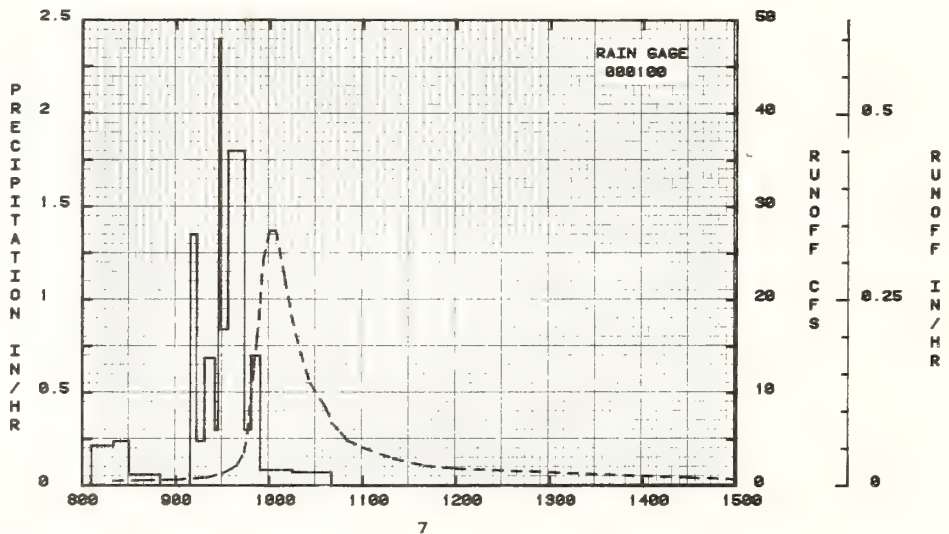
NOTES: To convert CFS to IN/DAY, multiply by 0.300528. STA AV based on 2 yr period (1967-1968).

1969	MEAN DAILY DISCHARGE (cfs)					COSHOCTON, OHIO					WATERSHED 166		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.087	0.407	0.030	0.062	0.021	0.009	0.021	0.152	0.003	0.004	0.106	0.008	
2	0.082	0.335	0.030	0.074	0.017	0.101	0.013	0.115	0.004	0.077	0.109	0.006	
3	0.060	0.256	0.027	0.054	0.015	0.025	0.008	0.093	0.004	0.011	0.027	0.006	
4	0.039	0.181	0.021	0.052	0.015	0.013	0.009	0.082	0.003	0.003	0.019	0.004	
5	0.030	0.150	0.021	0.188	0.013	0.013	6.807E	0.055	0.015	0.003	0.015	0.003	
6	0.024	0.123	0.024	0.153	0.011	0.015	0.690	0.046	0.078	0.004	0.015E	0.003	
7	0.024	0.104	0.024	0.136	0.011	0.011	1.449E	0.039	0.009E	0.004	0.013E	0.074	
8	0.024	0.184	0.024	0.129	0.159	0.008	0.538	0.044	0.006E	0.007	0.009E	0.041	
9	0.021	0.238	0.021	0.123	0.127	0.008	0.366	0.160	0.004	0.009	0.006	0.024	
10	0.015	0.157	0.019	0.121	0.149	0.006	0.486	0.064	0.003	0.009	0.005	0.064	
11	0.008	0.150	0.017	0.087	0.123	0.006	0.243	0.035	0.003	0.011	0.005	0.121	
12	0.005	0.143	0.015	0.072	0.074	0.017	0.182	0.030	0.003	0.011	0.005	0.078	
13	0.004	0.117	0.013	0.062	0.050	0.035	0.136	0.024	0.002	0.011	0.006	0.062	
14	0.004	0.082	0.011	0.058	0.033	0.034	0.102	0.017	0.002	0.006	0.008	0.067	
15	0.006	0.067	0.011	0.079	0.021	0.022	0.074	0.015	0.002	0.002	0.008	0.058	
16	0.009	0.067	0.011	0.058	0.017	0.013	0.067	0.015	0.002	0.003	0.008	0.043	
17	0.142	0.062	0.011	0.050	0.015	0.009	0.059	0.017	0.007	0.003	0.009	0.033	
18	0.450	0.054	0.013	0.104	0.038	0.008	0.046	0.013	0.008	0.003	0.008	0.033	
19	0.126	0.046	0.015	0.092	0.027	0.006	0.089	0.083	0.008	0.003	0.118	0.033	
20	0.098	0.039	0.025	0.063	0.017	0.005	0.944	0.023	0.006	0.034	0.032	0.024	
21	0.104	0.036	0.025	0.054	0.015E	0.004	0.206	0.011	0.004	0.007	0.021	0.021	
22	0.108	0.039	0.015	0.060	0.013	0.003	0.203	0.008	0.002	0.003	0.019	0.024	
23	0.116	0.043	0.015	0.057	0.011	0.313	0.158	0.006	0.002	0.004	0.032	0.021	
24	0.131	0.043	0.104	0.047	0.009	0.091	0.123	0.005	0.002	0.005	0.024	0.019	
25	0.078	0.039	0.200	0.033	0.023	0.054	0.093	0.005	0.001	0.005	0.017	0.017	
26	0.058	0.036	0.130	0.030	0.011	0.030	0.077	0.005	0.001	0.005	0.013	0.015	
27	0.050	0.033	0.098	0.027	0.009	0.020	3.193E	0.004	0.001	0.005	0.011	0.015	
28	0.118E	0.030	0.087	0.038	0.008	0.017	0.435	0.003	0.001	0.003	0.011	0.013	
29	0.364E		0.082	0.033	0.008	0.015	0.370	0.003	0.001	0.002	0.011	0.020	
30	0.891E		0.067	0.027	0.008	0.020	0.329	0.003	0.002	0.002	0.011	0.030	
31	0.537		0.058		0.008		0.211	0.003		0.002		0.068	
MEAN	0.1231	0.1166	0.0409	0.0742	0.0348	0.0311	0.5719	0.0381	0.0064	0.0085	0.0235	0.0339	
INCHES	1.154	0.981	0.381	0.669	0.324	0.281	5.328	0.355	0.058	0.079	0.212	0.316	
STA AV	1.009	0.904	2.242	0.895	1.509	0.292	1.915	0.147	0.038	0.045	0.169	0.843	

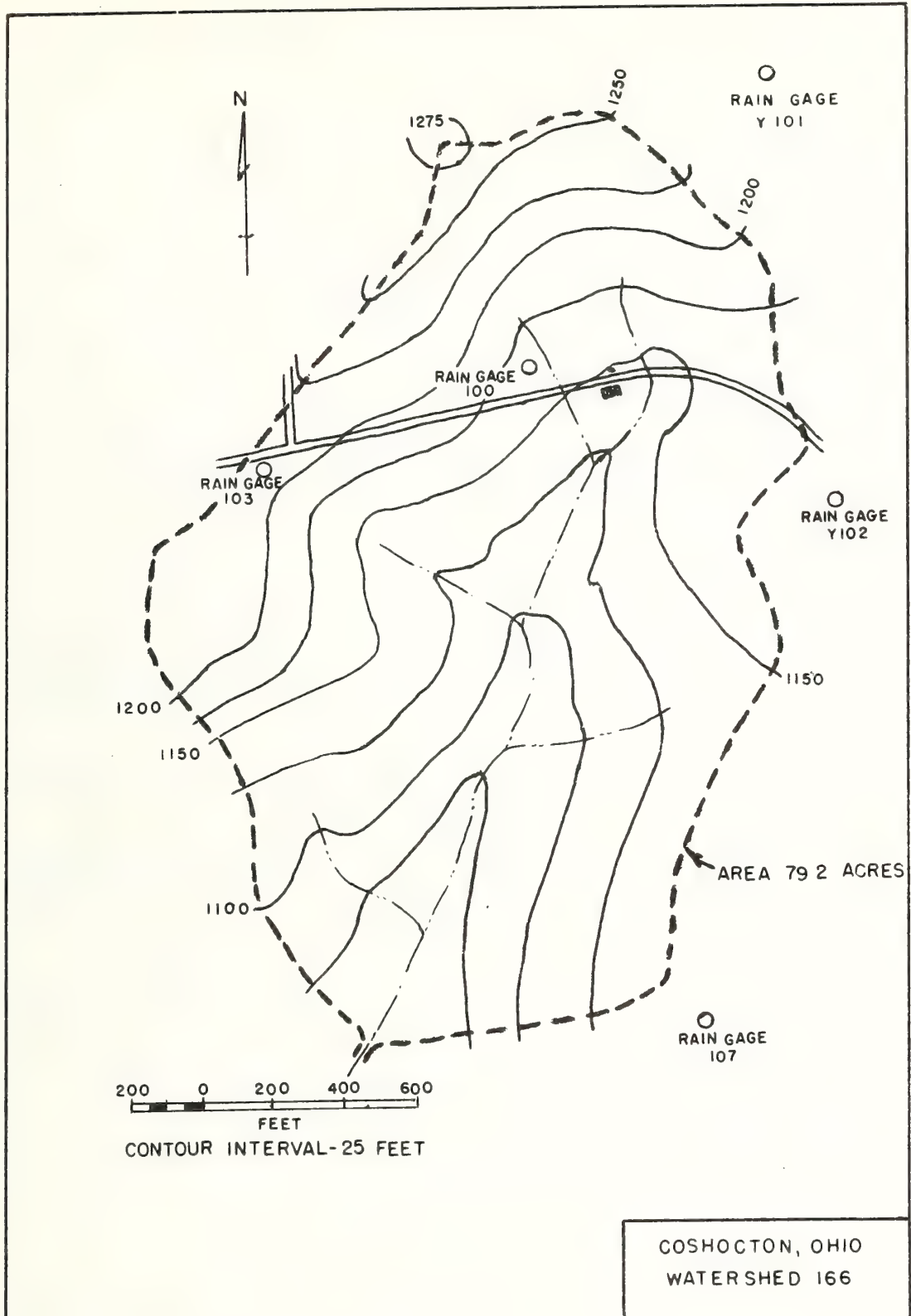
NOTES: To convert CFS to IN/DAY, multiply by 0.300528. STA AV based on 3 yr period (1967-1969).

1969 SELECTED RUNOFF EVENT			COSHOCTON, OHIO WATERSHED 166							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 7, 1969										
7- 7	RG 000100			RG 000100			7- 7			
	0.0	0.048	7- 7	806	0.0	0.0		820	0.520	0.0
				820	0.2142	0.05		840	0.590	0.0023
				830	0.2401	0.09		900	0.660	0.0050
				850	0.0600	0.11		920	0.900	0.0083
				909	0.0	0.11		930	1.320	0.0106
WATERSHED CONDITIONS: Cover of 4%, hardwoods; 6%, reforested; 67%, grassland; 17%, cultivated; 6%, miscel- laneous; watershed in im- proved practice.				913	1.3502	0.20		936	1.840	0.0125
				918	0.2399	0.22		940	2.340	0.0142
				925	0.6857	0.30		944	3.660	0.0167
				927	0.3003	0.31		946	5.670	0.0188
				928	2.3996	0.35		948	9.370	0.0217
				933	0.8401	0.42		950	12.700	0.0266
				944	1.8000	0.75		952	15.900	0.0322
				948	0.2998	0.77		954	19.700	0.0400
				954	0.7001	0.84		956	24.300	0.0486
				1015	0.0857	0.87		1000	27.400	0.0714
				1040	0.0720	0.90		1004	27.400	0.0942
								1010	22.200	0.1245
								1014	18.200	0.1413
								1020	14.300	0.1620
								1026	11.000	0.1775
								1036	8.370	0.1979
								1040	6.740	0.2042
								1046	5.670	0.2121
								1050	4.830	0.2165
								1100	4.100	0.2259
								1120	2.880	0.2404
								1140	2.160	0.2509
								1200	1.840	0.2593
								1300	1.440	0.2798
								1430	0.900	0.3018
								1800	0.700	0.3369
								2100	0.660	0.3625

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01252197.



EVENT OF JULY 7, 1969
COSHOCTON, OHIO WATERSHED 166



STILLWATER, OKLAHOMA WATERSHED W-1

LOCATION: Noble Co., Okla.; 15 mi. N. of Stillwater; Black Bear Creek, Arkansas River.

AREA: 16.70 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														STILLWATER, OKLAHOMA WATERSHED W-1																
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																
1969	P	0.56	1.87	2.74	2.84	4.00	7.38	1.14	3.47	5.20	2.48	0.32	1.57	33.57																
	Q	0.222	1.693	1.971	1.304	1.615	1.257	0.0	0.005	0.158	0.150	0.019	0.274	8.668																
STA AV	P	0.62	1.06	1.96	2.34	5.08	4.06	4.07	2.93	3.53	2.42	1.59	1.12	30.77																
	Q	0.131	0.284	0.765	0.715	1.792	0.948	0.631	0.068	0.396	0.602	0.379	0.208	6.918																
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																														
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																						
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.									
1969		5- 7	1.370	5- 7	0.530	4-16	0.832	4-16	1.193	3-23	1.253	3-23	1.523	3-22	1.628	3-22	1.669													
MAXIMUMS FOR PERIOD OF RECORD																														
		4-18	6.990	7-15	3.314	7-15	3.737	7-15	3.963	10- 2	4.519	7- 4	5.185	10- 1	5.679	9-29	7.627													
		1957		1951		1951		1951		1959		1951		1959		1959														

NOTES: Watershed conditions: All native grass pasture. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 37.1-7 (Revised). Precipitation data obtained from R-1 recording rain gage. Precipitation and runoff records began July 1951. Station average precipitation data from R-3 recording rain gage record through 1964 combined with data from R-1 for 1965 through 1969. For long-time precipitation records, see U.S. Weather Bureau records at Stillwater, Oklahoma.

1969 DAILY PRECIPITATION (inches)													STILLWATER, OKLAHOMA WATERSHED W-1									
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec										
1	0.0	0.0	0.0	0.0	0.0	1.69	0.0	0.0	0.0	0.0	0.0	0.0										
2	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.0										
3	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.02	0.0										
4	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.07	0.0	0.0	0.0	0.0										
5	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.21										
6	0.0	0.0	0.05	0.0	2.18	0.0	0.20	0.0	0.0	0.28	0.0	0.16										
7	0.0	0.0	0.37	0.0	0.97	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
8	0.0	0.0	0.01	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08										
11	0.0	0.0	0.0	0.0	0.0	0.79	0.0	0.0	0.0	0.0	0.27	0.0										
12	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	1.52	0.0	0.0										
13	0.0	0.28	0.0	0.08	0.26	0.41	0.0	0.0	0.0	0.0	0.0	0.0										
14	0.0	0.78	0.05	0.0	0.0	1.62	0.0	0.0	0.18	0.0	0.0	0.0										
15	0.03	0.23	0.0	0.21	0.41	0.0	0.0	2.74	2.48	0.0	0.0	0.0										
16	0.04	0.0	0.0	2.17	0.04	0.0	0.0	0.0	1.18	0.0	0.03	0.0										
17	0.0	0.0	0.0	0.05	0.14	1.65	0.0	0.0	0.0	0.0	0.0	0.0										
18	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
20	0.0	0.51	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.02	0.0	0.0										
21	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
22	0.0	0.0	0.38	0.0	0.0	0.0	0.0	0.22	0.90	0.0	0.0	0.0										
23	0.0	0.03	1.66	0.0	0.0	0.51	0.0	0.0	0.0	0.01	0.0	0.0										
24	0.0	0.0	0.05	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0										
25	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.06	0.0	0.0	0.0	0.0										
26	0.0	0.0	0.0	0.23	0.0	0.26	0.0	0.38	0.0	0.0	0.0	0.0										
27	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0	0.0	0.0										
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
29	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.65	0.0	0.12										
30	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0										
31	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0										
TOTAL	0.56	1.87	2.74	2.84	4.00	7.38	1.14	3.47	5.20	2.48	0.32	1.57										
STA AV	0.62	1.06	1.96	2.34	5.08	4.06	4.07	2.93	3.53	2.42	1.59	1.12										

NOTES: Amounts recorded at rain gage R-1 used for current monthly totals and for runoff events. STA AV based on 19 yr period.

1969 MEAN DAILY DISCHARGE (cfs) STILLWATER, OKLAHOMA WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.018	0.0	0.0	0.0	0.0	0.0	0.0
2	0.025	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.026
6	0.0	0.0	0.0	0.0	0.422	0.0	0.0	0.0	0.0	0.0	0.0	0.115
7	0.0	0.0	0.058	0.0	0.520	0.0	0.0	0.0	0.0	0.0	0.0	0.019
8	0.0	0.0	0.095	0.0	0.167	0.0	0.0	0.0	0.0	0.0	0.0	0.015
9	0.0	0.0	0.027	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.008
10	0.0	0.0	0.011	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.008
11	0.0	0.0	0.005	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.011	0.001
12	0.0	0.0	0.008	0.0	0.0	0.004	0.0	0.0	0.0	0.051	0.002	0.0
13	0.0	0.0	0.006	0.0	0.0	0.003	0.0	0.0	0.0	0.006	0.0	0.0
14	0.0	0.326	0.0	0.0	0.0	0.118	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.138	0.0	0.0	0.001	0.008	0.0	0.004	0.016	0.0	0.0	0.0
16	0.0	0.120	0.0	0.779	0.010	0.0	0.0	0.0	0.065	0.0	0.0	0.0
17	0.0	0.049	0.0	0.118	0.0 T	0.687	0.0	0.0	0.001	0.0	0.0	0.0
18	0.0	0.024	0.0	0.015	0.0	0.021	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.015	0.0	0.003	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.271	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.081	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.051	0.004	0.0	0.0	0.0	0.0	0.0	0.011	0.0	0.0	0.0
23	0.0	0.037	1.025	0.0	0.0	0.004	0.0	0.0	0.017	0.0	0.0	0.0
24	0.0	0.034	0.117	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.024	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.015	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.002	0.0	0.0	0.0	0.009	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.016	0.0	0.0
30	0.039	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.0	0.0
31	0.021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0
MEAN	0.0050	0.0424	0.0446	0.0305	0.0365	0.0294	0.0	0.0001	0.0037	0.0034	0.0004	0.0062
INCHES	0.222	1.693	1.971	1.304	1.615	1.257	0.0	0.005	0.158	0.150	0.019	0.274
STA AV	0.131	0.284	0.765	0.715	1.792	0.948	0.631	0.068	0.396	0.602	0.379	0.208

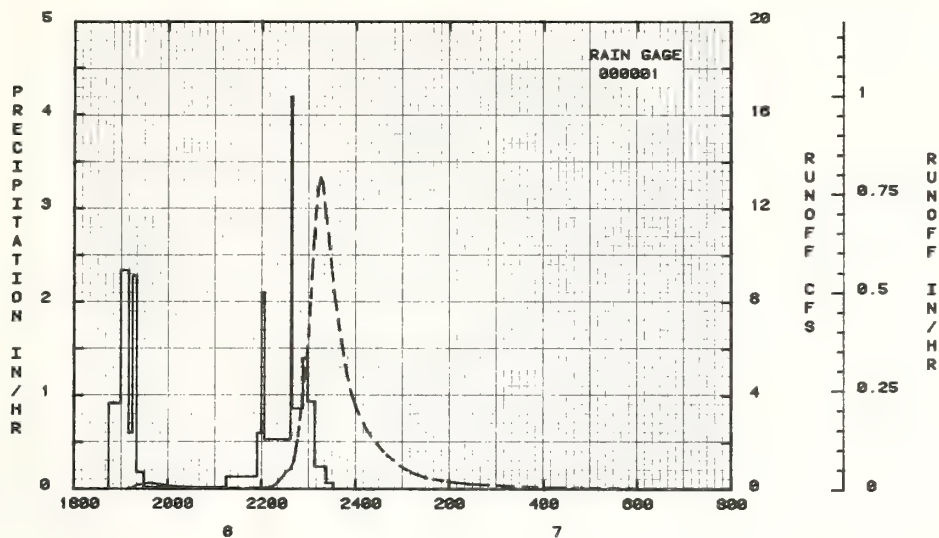
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 1.425247.

1969	SELECTED RUNOFF EVENT					STILLWATER, OKLAHOMA WATERSHED W-1							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF						
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.			
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)			
EVENT OF MAY 6 - 7, 1969													
RG 000001			RG 000001										
5- 6	0.0	0.0	5- 6	1845	0.0	0.0	5- 6	1908	0.0	0.0			
				1900	0.9200	0.23		1910	0.030	0.0			
				1910	2.3401	0.62		1911	0.040	0.0001			
				1915	0.5999	0.67		1914	0.040	0.0002			
				1920	2.2801	0.86		1915	0.060	0.0002			
WATERSHED CONDITIONS:				1930	0.1800	0.89		1916	0.090	0.0003			
100% of area in native grass				2115	0.0171	0.92		1917	0.100	0.0004			
pasture; pasture in fair				2155	0.1350	1.01		1918	0.120	0.0005			
condition.				2200	0.5999	1.06		1920	0.160	0.0008			
				2204	2.1000	1.20		1921	0.190	0.0010			
				2237	0.5273	1.49		1926	0.190	0.0019			
				2239	4.1991	1.63		1932	0.240	0.0032			
				2253	0.8571	1.83		1937	0.260	0.0044			
				2259	1.4001	1.97		1948	0.200	0.0070			
				2308	0.9333	2.11		1957	0.160	0.0086			
				2323	0.2400	2.17		2007	0.120	0.0100			
				2332	0.0667	2.18		2014	0.100	0.0108			
								2025	0.080	0.0118			
								2046	0.060	0.0132			
								2120	0.040	0.0150			
								2156	0.040	0.0166			
								2204	0.060	0.0170			
								2211	0.080	0.0175			
								2213	0.100	0.0176			
								2214	0.120	0.0178			
								2216	0.150	0.0181			
								2218	0.190	0.0184			
								2220	0.260	0.0188			
								2222	0.320	0.0194			
								2224	0.410	0.0201			
								2227	0.520	0.0215			
								2231	0.720	0.0239			
								2237	0.860	0.0286			
								2242	1.220	0.0338			
								2244	1.700	0.0367			

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.059385.

1969			SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-1				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969 (CONTINUED)										
							5- 6	2247	2.260	0.0425
								2249	2.960	0.0477
								2252	3.790	0.0577
								2255	4.770	0.0704
								2258	5.730	0.0860
								2300	6.620	0.0983
								2302	7.540	0.1122
								2303	8.180	0.1200
								2305	11.000	0.1390
								2307	12.480	0.1622
								2309	13.270	0.1878
								2312	13.830	0.2280
								2315	13.440	0.2686
								2318	12.220	0.3065
								2322	10.650	0.3718
								2326	9.710	0.3921
								2330	8.530	0.4283
								2334	8.050	0.4611
								2338	7.160	0.4912
								2343	6.100	0.5240
								2348	5.030	0.5515
								2355	4.010	0.5828
							5- 7	2400	3.550	0.6016
								13	2.590	0.6411
								28	1.890	0.6743
								40	1.460	0.6942
								57	1.000	0.7150
								111	0.720	0.7269
								120	0.590	0.7327
								140	0.410	0.7426
								158	0.320	0.7490
								209	0.280	0.7523
								224	0.220	0.7560
								238	0.190	0.7589
								310	0.143	0.7643
								340	0.100	0.7676
								415	0.080	0.7707
								500	0.060	0.7738
								635	0.040	0.7787
								1000	0.030	0.7859
								1400	0.020	0.7911
								2236	0.010	0.7975

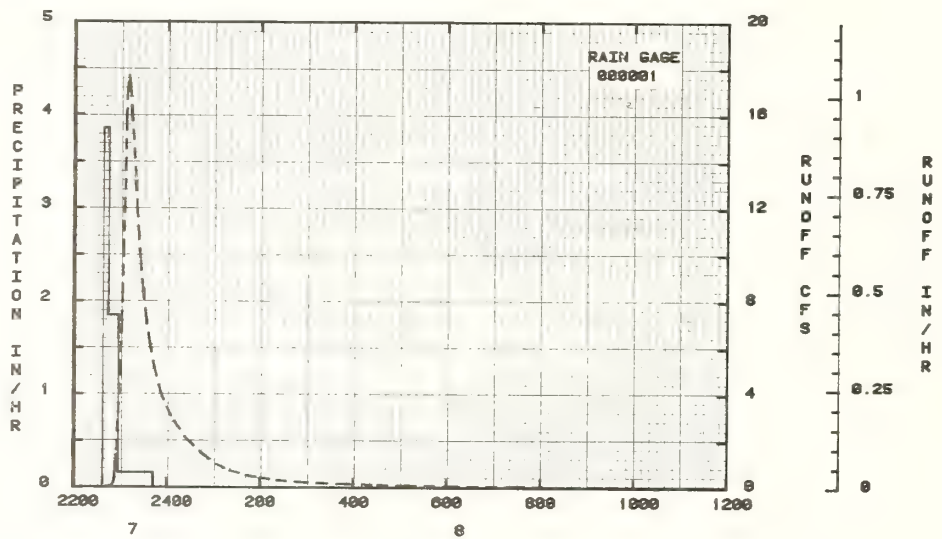
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.059385.



1969 SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-1								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF MAY 7 - 10, 1969											
5- 7	RG 000001 0.0	0.196	5- 7	RG 000001 2238	0.0	0.0	5- 7	2236	0.010	0.0	
				2245	3.8571	0.45		2242	0.020	0.0001	
				2258	1.8462	0.85		2245	0.040	0.0002	
				2343	0.1600	0.97		2247	0.050	0.0003	
								2249	0.070	0.0004	
WATERSHED CONDITIONS: 100% of area in native grass pasture; pasture in fair condition.									2250	0.090	0.0005
								2251	0.110	0.0006	
								2252	0.200	0.0007	
								2253	0.360	0.0010	
								2254	0.670	0.0015	
								2255	1.000	0.0023	
								2256	1.620	0.0036	
								2257	2.490	0.0057	
								2258	3.220	0.0085	
								2259	4.010	0.0121	
								2300	5.030	0.0166	
								2301	5.840	0.0219	
								2302	7.160	0.0283	
								2303	8.320	0.0360	
								2304	15.470	0.0479	
								2305	18.120	0.0644	
								2306	20.890	0.0837	
								2307	23.060	0.1053	
								2308	20.700	0.1272	
								2310	18.120	0.1655	
								2312	15.260	0.1986	
								2314	13.590	0.2271	
								2317	12.110	0.2653	
								2319	10.810	0.2880	
								2321	10.090	0.3087	
								2323	9.530	0.3281	
								2326	8.620	0.3550	
								2329	8.470	0.4118	
								2332	7.410	0.4116	
								2338	6.210	0.4456	

1969	SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-1						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 7 - 10, 1969 (CONTINUED)										
							5- 7	2344	5.170	0.4793
								2352	4.130	0.5161
								2400	3.430	0.5461
							5- 8	10	2.830	0.5771
								26	2.070	0.6159
								46	1.460	0.6509
								104	1.000	0.6728
								122	0.720	0.6881
								143	0.520	0.7010
								201	0.410	0.7093
								222	0.320	0.7168
								250	0.240	0.7246
								315	0.190	0.7299
								348	0.150	0.7355
								432	0.110	0.7411
								509	0.090	0.7448
								604	0.070	0.7492
								727	0.050	0.7543
								1040	0.040	0.7630
								2240	0.020	0.7822
								2400	0.020	0.7835
							5- 9	1200	0.010	0.7925
								2400	0.010	0.7985
							5-10	1010	0.0	0.8010

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.059385.



EVENT OF MAY 7 - 10, 1969
STILLWATER, OKLAHOMA WATERSHED W-1

STILLWATER, OKLAHOMA WATERSHED W-3

LOCATION: Noble Co., Okla.; 15 mi. N. of Stillwater; Black Bear Creek, Arkansas River.

AREA: 92.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)										STILLWATER, OKLAHOMA WATERSHED W-3							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.63	1.89	2.59	2.84	3.74	6.83	1.16	3.43	4.78	2.48	0.29	1.62	32.28			
	Q	0.0	1.138	1.762	1.191	1.385	1.015	0.0	0.0	0.035	0.015	0.0	0.088	6.629			
STA AV	P	0.61	1.06	1.96	2.30	5.02	4.00	4.03	2.93	3.45	2.39	1.56	1.12	30.42			
	Q	0.044	0.166	0.589	0.581	1.544	0.804	0.535	0.083	0.333	0.544	0.198	0.088	5.510			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5- 7	0.559	5- 7	0.404	4-16	0.574	4-16	0.955	3-23	1.031	3-23	1.245	3-23	1.313	3-22	1.400
MAXIMUMS FOR PERIOD OF RECORD																	
		7-15	4.739	7-15	2.896	7-15	3.486	7-15	3.796	10- 1	4.957	10- 1	5.185	10- 1	6.083	9-30	8.143
		1951		1951		1951		1951		1959		1959		1959		1959	

NOTES: Watershed conditions: All native grass cover. For map of watershed, see Selected Runoff Events for Small Agricultural Watersheds in the United States, USDA, AER, Jan. 1960, p. 37.2-6. Precipitation data obtained from R-3 recording rain gage. Precipitation and runoff records began July 1951. Station average precipitation data from R-3 recording rain gage records from 1951 through 1969. For long-time precipitation records, see U.S. Weather Bureau records at Stillwater, Oklahoma.

1969 DAILY PRECIPITATION (inches)													STILLWATER, OKLAHOMA WATERSHED W-3												
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
1	0.0	0.0	0.0	0.0	0.0	0.0	1.67	0.0	0.0	0.0	0.0	0.0	0.0												
2	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.38	0.0	0.0	0.0												
3	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0												
4	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.07	0.0	0.0	0.0	0.0												
5	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
6	0.0	0.0	0.0	0.05	0.0	2.00	0.0	0.17	0.0	0.0	0.31	0.0	0.13												
7	0.0	0.0	0.0	0.36	0.0	0.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
8	0.0	0.0	0.0	0.0	0.06	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07												
11	0.0	0.0	0.0	0.0	0.0	0.0	0.81	0.0	0.0	0.0	0.02	0.26	0.0												
12	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	1.42	0.0	0.0												
13	0.0	0.30	0.0	0.08	0.23	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
14	0.0	0.79	0.03	0.0	0.0	1.42	0.0	0.0	0.0	0.19	0.0	0.0	0.0												
15	0.03	0.24	0.04	0.20	0.37	0.0	0.0	0.0	2.54	2.38	0.0	0.0	0.0												
16	0.06	0.0	0.0	0.0	2.10	0.05	0.0	0.0	0.0	1.02	0.0	0.03	0.0												
17	0.0	0.0	0.0	0.05	0.13	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
18	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
20	0.0	0.48	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.02	0.0	0.02												
21	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
22	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.35	0.81	0.0	0.0	0.0												
23	0.0	0.04	1.55	0.0	0.0	0.0	0.53	0.0	0.0	0.0	0.02	0.0	0.0												
24	0.0	0.0	0.04	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0												
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.05	0.0	0.0	0.0	0.0												
26	0.0	0.0	0.0	0.24	0.0	0.15	0.0	0.0	0.42	0.0	0.0	0.0	0.0												
27	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
29	1.54		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.18												
30	0.0		0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0												
31	0.0		0.0		0.02			0.14	0.0		0.0		0.0												
TOTAL		0.63	1.89	2.59	2.84	3.74	6.83	1.16	3.43	4.78	2.48	0.29	1.62												
STA AV		0.61	1.06	1.96	2.30	5.02	4.00	4.03	2.93	3.45	2.39	1.56	1.12												

NOTES: Amounts recorded at rain gage R-3 used for current monthly totals and for runoff events. STA AV based on 19 yr period.

1969 MEAN DAILY DISCHARGE (cfs) STILLWATER, OKLAHOMA WATERSHED W-3												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.042	0.037	0.0	0.083	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.037	0.037	0.0	0.015	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.037	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.037	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.042	0.023	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.023
6	0.0	0.0	0.056	0.019	1.171	0.0	0.0	0.0	0.0	0.0	0.0	0.224
7	0.0	0.0	0.073	0.014	2.510	0.0	0.0	0.0	0.0	0.0	0.0	0.058
8	0.0	0.0	0.284	0.0	1.206	0.0	0.0	0.0	0.0	0.0	0.0	0.032
9	0.0	0.0	0.067	0.0	0.074	0.0	0.0	0.0	0.0	0.0	0.0	0.003
10	0.0	0.0	0.063	0.0	0.051	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.056	0.0	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.056	0.0	0.019	0.0	0.0	0.0	0.0	0.047	0.0	0.0
13	0.0	0.006	0.056	0.0	0.028	0.0	0.0	0.0	0.0	0.013	0.0	0.0
14	0.0	1.103	0.056	0.0	0.0	0.404	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.529	0.056	0.0	0.014	0.068	0.0	0.0	0.015	0.0	0.0	0.0
16	0.0	0.495	0.056	3.308	0.065	0.037	0.0	0.0	0.120	0.0	0.0	0.0
17	0.0	0.158	0.056	0.706	0.063	3.076	0.0	0.0	0.002	0.0	0.0	0.0
18	0.0	0.073	0.056	0.086	0.056	0.097	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.063	0.042	0.063	0.047	0.058	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	1.164	0.037	0.056	0.011	0.042	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.289	0.023	0.042	0.0	0.008	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.128	0.026	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.079	4.540	0.032	0.0	0.008	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.072	0.546	0.019	0.0	0.028	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.065	0.078	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.063	0.065	0.018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.056	0.058	0.019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.056	0.056	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.056	0.056	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.056	0.056	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.042	0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.1570	0.2197	0.1534	0.1727	0.1308	0.0	0.0	0.0046	0.0019	0.0	0.0110
INCHES	0.0	1.138	1.762	1.191	1.385	1.015	0.0	0.0	0.035	0.015	0.0	0.088
STA AV	0.044	0.166	0.589	0.581	1.544	0.804	0.535	0.083	0.333	0.544	0.198	0.088

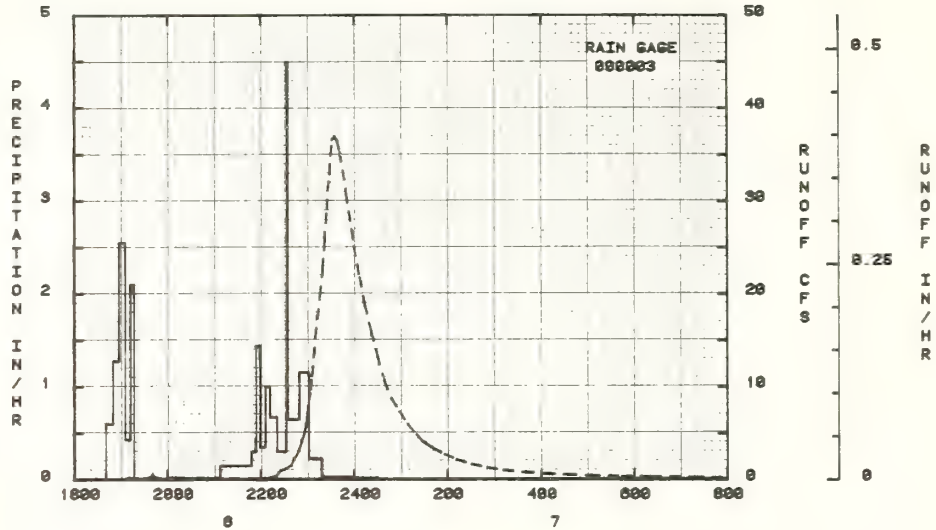
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.258715.

1969 SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-3								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 6 - 7, 1969											
RG 000003			EG 000003								
5- 6	0.0	0.0	5- 6	1841	0.0	0.0	5- 6	1906	0.0	0.0	
				1850	0.6000	0.09		1908	0.180	0.0	
				1858	1.2750	0.26		1912	0.140	0.0001	
				1906	2.5500	0.60		1919	0.090	0.0002	
				1913	0.4286	0.65		1926	0.030	0.0003	
WATERSHED CONDITIONS:				1917	2.1000	0.79		1940	0.350	0.0008	
100% of area in native grass;				2038	0.0148	0.81		1941	0.620	0.0009	
32% in hay meadow in good				2108	0.0200	0.82		1942	0.340	0.0010	
condition, 46% in pasture in				2148	0.1500	0.92		1950	0.110	0.0013	
good condition, and 22% in				2154	0.3000	0.95		1958	0.090	0.0014	
pasture in fair condition.				2159	1.4401	1.07		2002	0.170	0.0015	
				2206	0.3429	1.11		2005	0.240	0.0016	
				2212	0.9999	1.21		2013	0.190	0.0019	
				2221	0.6667	1.31		2027	0.110	0.0023	
				2233	0.3000	1.37		2046	0.080	0.0026	
				2235	4.4991	1.52		2120	0.070	0.0031	
				2249	0.6428	1.67		2155	0.100	0.0036	
				2302	1.1539	1.92		2204	0.140	0.0038	
				2318	0.2250	1.98		2212	0.210	0.0040	
				2400	0.0286	2.00		2215	0.290	0.0041	
			5- 7	30	0.0200	2.01		2219	0.370	0.0043	
								2221	0.480	0.0045	
								2224	0.790	0.0048	
								2225	1.000	0.0050	
								2226	0.920	0.0052	
								2228	1.040	0.0056	
								2230	1.100	0.0060	
								2232	1.150	0.0064	
								2235	1.280	0.0071	
								2239	1.540	0.0081	
								2242	2.050	0.0091	
								2244	2.340	0.0099	
								2247	2.700	0.0113	
								2250	3.340	0.0129	
								2253	4.070	0.0149	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01078.

1969	SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-3						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969 (CONTINUED)										
5- 6							2256	4.920	0.0173	
							2258	5.770	0.0192	
							2300	6.980	0.0215	
							2302	8.290	0.0242	
							2304	9.690	0.0274	
							2306	11.180	0.0311	
							2308	13.170	0.0355	
							2310	15.310	0.0406	
							2313	17.350	0.0494	
							2316	19.800	0.0594	
							2320	22.710	0.0747	
							2322	25.620	0.0833	
							2325	29.110	0.0981	
							2328	32.870	0.1148	
							2332	36.560	0.1397	
							2335	36.950	0.1595	
							2338	36.570	0.1793	
							2342	35.240	0.2051	
							2350	30.790	0.2525	
							2357	26.830	0.2887	
5- 7							2400	25.080	0.3027	
							7	21.720	0.3321	
							14	18.810	0.3576	
							22	15.900	0.3825	
							30	13.340	0.4035	
							39	10.600	0.4228	
							48	8.670	0.4384	
							58	7.310	0.4528	
							109	5.920	0.4659	
							120	4.830	0.4765	
							129	4.030	0.4837	
							141	3.380	0.4917	
							156	2.710	0.4999	
							212	2.150	0.5069	
							231	1.640	0.5134	
							251	1.290	0.5187	
							312	1.010	0.5230	
							338	0.790	0.5272	
							405	0.650	0.5307	
							433	0.550	0.5337	
503	0.440	0.5364								
544	0.360	0.5393								
622	0.300	0.5415								
716	0.240	0.5441								
804	0.200	0.5460								
853	0.170	0.5476								
1100	0.140	0.5511								
1530	0.100	0.5568								
2240	0.110	0.5651								

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01078.



EVENT OF MAY 6 - 7, 1969
STILLWATER, OKLAHOMA WATERSHED W-3

1969 SELECTED RUNOFF EVENT

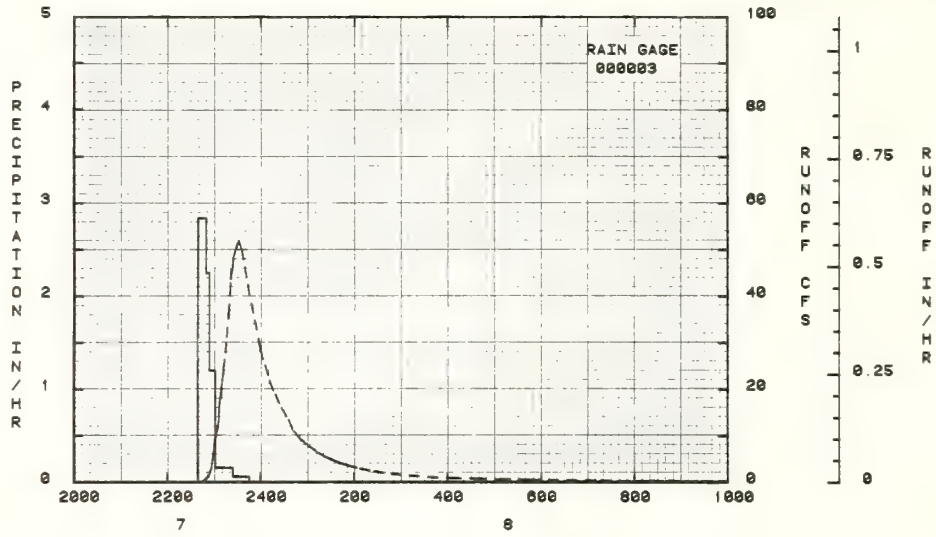
STILLWATER, OKLAHOMA WATERSHED W-3

ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 7 - 12, 1969										
5- 7	RG 000003	0.263	5- 7	RG 000003			5- 7			
	0.0			2239	0.0	0.0		2240	0.110	0.0
				2250	2.8363	0.52		2245	0.220	0.0001
				2254	2.2500	0.67		2248	0.430	0.0003
				2302	1.2000	0.83		2249	0.640	0.0004
				2325	0.1565	0.89		2250	0.810	0.0005
				2346	0.0571	0.91		2251	1.020	0.0007
WATERSHED CONDITIONS: 100% of area in native grass; 32% in hay meadow in good condition, 46% in pasture in good condition, and 22% in pasture in fair condition.								2252	0.970	0.0009
								2253	1.160	0.0011
								2254	1.550	0.0013
								2255	2.110	0.0016
								2256	2.670	0.0020
								2257	3.120	0.0025
								2258	4.120	0.0031
								2259	5.440	0.0040
								2300	7.110	0.0051
								2301	8.930	0.0065
								2302	9.870	0.0082
								2303	9.780	0.0100
								2304	10.880	0.0119
								2305	11.560	0.0139
								2306	13.430	0.0161
								2307	15.740	0.0187
								2308	17.530	0.0217
								2309	19.170	0.0250
								2311	21.820	0.0323
								2313	24.420	0.0406
								2315	27.940	0.0500
								2317	31.230	0.0606
								2319	36.230	0.0728
								2321	40.820	0.0866
								2322	43.800	0.0942
								2324	46.390	0.1105
								2326	48.870	0.1275
								2329	50.890	0.1544
								2332	51.860	0.1821

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01078.

1969	SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA			WATERSHED W-3			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MAY 7 - 12, 1969 (CONTINUED)										
							5- 7	2336	49.800	0.2186
								2340	46.070	0.2530
								2344	42.320	0.2848
								2348	38.420	0.3138
								2353	34.700	0.3467
								2358	30.350	0.3759
								2400	28.410	0.3865
							5- 8	6	25.030	0.4153
								12	21.670	0.4405
								19	18.810	0.4660
								27	15.930	0.4910
								36	13.340	0.5146
								43	10.880	0.5298
								52	9.090	0.5459
								101	7.840	0.5596
								113	6.420	0.5750
								125	5.290	0.5876
								133	4.670	0.5948
								140	4.180	0.6004
								152	3.600	0.6088
								208	2.890	0.6181
								226	2.300	0.6265
								248	1.790	0.6346
								311	1.400	0.6412
								335	1.120	0.6466
								405	0.870	0.6520
								437	0.720	0.6566
								508	0.610	0.6603
								546	0.500	0.6641
								634	0.410	0.6680
								717	0.340	0.6709
								819	0.280	0.6743
								928	0.220	0.6774
								1045	0.190	0.6803
								1310	0.150	0.6848
								1750	0.120	0.6917
								2400	0.090	0.6987
							5- 9	1200	0.070	0.7094
								2400	0.060	0.7178
							5-10	1200	0.060	0.7250
								2400	0.040	0.7310
							5-11	1200	0.040	0.7358
								2400	0.040	0.7406
							5-12	1200	0.020	0.7442
								2400	0.0	0.7454

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.01078.



EVENT OF MAY 7 - 12, 1969
 STILLWATER, OKLAHOMA WATERSHED W-3

STILLWATER, OKLAHOMA WATERSHED W-4

LOCATION: Noble Co., Okla.; 15 mi. N. of Stillwater; Black Bear Creek, Arkansas River.

AREA: 206.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														STILLWATER, OKLAHOMA WATERSHED W-4													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	0.55	1.77	2.47	2.59	3.89	6.46	0.95	3.20	5.17	2.78	0.26	1.50	31.59													
	Q	0.002	0.281	0.701	0.672	1.217	0.524	0.0	0.015	0.153	0.043	0.0	0.068	3.677													
STA AV	P	0.54	1.01	1.88	2.21	4.86	3.86	3.90	2.78	3.49	2.44	1.47	1.06	29.52													
	Q	0.061	0.088	0.347	0.361	1.207	0.722	0.501	0.067	0.340	0.487	0.117	0.070	4.368													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		5- 7	0.512	5- 6	0.401	5- 6	0.536	5- 6	0.615	5- 6	0.638	5- 6	0.650	5- 6	1.180	5- 6	1.193										
MAXIMUMS FOR PERIOD OF RECORD																											
		4-18	2.390	4-18	1.473	4-18	1.936	10- 2	2.628	10- 2	4.493	10- 2	4.711	10- 1	5.238	9-30	6.877										
		1957		1957		1957		1959		1959		1959		1959		1959											

NOTES: Watershed conditions: All native grass cover. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 37.3-6 (Revised). Precipitation and runoff records began July 1951. Station average precipitation data from R-4 recording rain gage record through 1964 combined with R-2 for 1965 through 1969. For long-time precipitation records, see U.S. Weather Bureau records at Stillwater, Oklahoma.

1969					STILLWATER, OKLAHOMA WATERSHED W-4									
DAILY PRECIPITATION (inches)														
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	1.34	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.07	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22		
6	0.0	0.0	0.05	0.0	2.17	0.0	0.16	0.0	0.0	0.26	0.0	0.10		
7	0.0	0.0	0.32	0.0	0.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05		
11	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.01	0.23	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	1.72	0.0	0.0		
13	0.0	0.28	0.0	0.10	0.11	0.31	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.78	0.04	0.0	0.0	1.40	0.0	0.0	0.16	0.0	0.0	0.0		
15	0.03	0.18	0.0	0.15	0.44	0.0	0.0	2.51	2.10	0.0	0.0	0.0		
16	0.04	0.0	0.0	1.92	0.04	0.0	0.0	0.0	1.25	0.0	0.03	0.0		
17	0.0	0.0	0.0	0.06	0.12	1.43	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.50	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.07	0.0	0.02		
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.23	0.99	0.0	0.0	0.0		
23	0.0	0.03	1.44	0.0	0.0	0.47	0.0	0.0	0.0	0.02	0.0	0.0		
24	0.0	0.0	0.07	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.03	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.20	0.0	0.19	0.0	0.36	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.09		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.0	0.01	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.55	1.77	2.47	2.59	3.89	6.46	0.95	3.20	5.17	2.78	0.26	1.50		
STA AV	0.54	1.01	1.88	2.21	4.86	3.86	3.90	2.78	3.49	2.44	1.47	1.06		

NOTES: Amounts recorded at rain gage R-2 used for current monthly totals and for runoff events. STA AV based on 19 yr period.

1969 MEAN DAILY DISCHARGE (cfs) STILLWATER, OKLAHOMA WATERSHED W-4												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.021	0.0	0.232	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.036	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.010	0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.127
6	0.0	0.0	0.037	0.026	4.091	0.0	0.0	0.0	0.0	0.0	0.0	0.452
7	0.0	0.0	0.044	0.021	4.584	0.0	0.0	0.0	0.0	0.0	0.0	0.010
8	0.0	0.0	0.152	0.021	1.572	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.014	0.019	0.058	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.018	0.002	0.036	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.022	0.0	0.016	0.001	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.042	0.0	0.0	0.036	0.0	0.0	0.0	0.356	0.0	0.0
13	0.0	0.0	0.026	0.015	0.018	0.0	0.0	0.0	0.0	0.007	0.0	0.0
14	0.0	0.594	0.021	0.026	0.012	0.933	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.321	0.021	0.035	0.014	0.037	0.0	0.132	0.207	0.0	0.0	0.0
16	0.0	0.267	0.021	4.175	0.052	0.009	0.0	0.0	0.970	0.0	0.0	0.0
17	0.0	0.066	0.021	0.907	0.042	3.136	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.026	0.012	0.116	0.026	0.081	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.021	0.0	0.057	0.015	0.026	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.714	0.0	0.042	0.0	0.009	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.193	0.0	0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.076	0.002	0.026	0.0	0.0	0.0	0.0	0.108	0.0	0.0	0.0
23	0.0	0.042	4.561	0.021	0.0	0.0	0.0	0.0	0.042	0.0	0.0	0.0
24	0.0	0.042	0.670	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.026	0.112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.021	0.072	0.022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.021	0.047	0.037	0.0	0.040	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.003	0.042	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0
30	0.017		0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.0	0.0
31	0.0		0.021		0.0		0.0	0.0		0.0		0.0
MEAN	0.0005	0.0869	0.1957	0.1938	0.3399	0.1513	0.0	0.0042	0.0442	0.0119	0.0	0.0190
INCHES	0.002	0.281	0.701	0.672	1.217	0.524	0.0	0.015	0.153	0.043	0.0	0.068
STA AV	0.061	0.088	0.347	0.361	1.207	0.722	0.501	0.067	0.340	0.487	0.117	0.070

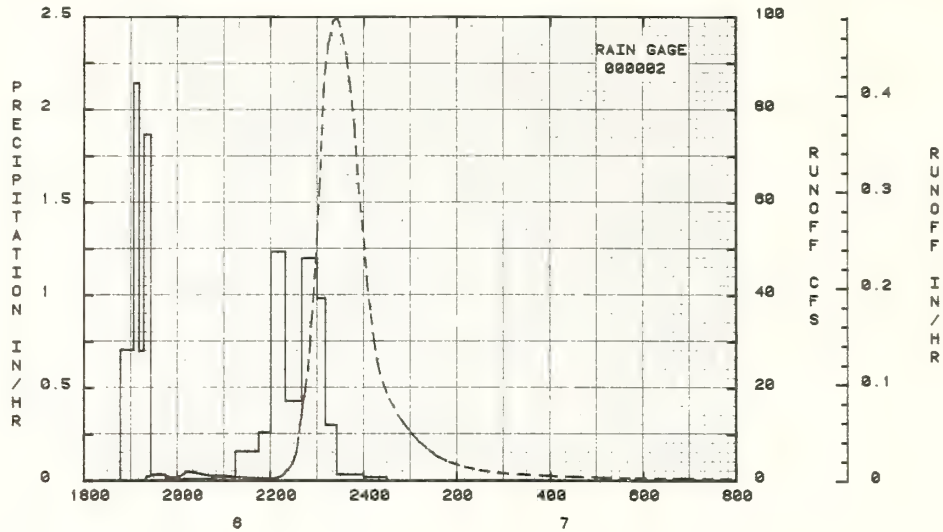
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.115542.

1969 SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-4									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF MAY 6 - 7, 1969												
5- 6	RG 000002		5- 6	EG 000002			5- 6	1907	0.0	0.0		
	0.0	0.0		1847	0.0	0.0		1909	0.02	0.0		
				1904	0.7059	0.20		1912	0.04	0.0		
				1911	2.1431	0.45		1916	0.02	0.0		
				1917	0.7000	0.52		1919	0.32	0.0		
				1926	1.8667	0.80						
WATERSHED CONDITIONS:				1945	0.0316	0.81		1920	0.74	0.0		
100% of area in native grass;				2045	0.0100	0.82		1921	0.91	0.0001		
17.3% used as hay meadow in				2115	0.0200	0.83		1922	1.00	0.0002		
good condition, and 82.7% in				2145	0.1600	0.91		1923	0.87	0.0003		
in pasture in fair condition.				2201	0.2625	0.98		1925	1.04	0.0005		
				2219	1.2333	1.35		1927	1.24	0.0007		
				2240	0.4286	1.50		1930	1.29	0.0010		
				2300	1.2000	1.90		1936	1.46	0.0017		
				2311	0.9819	2.08		1940	1.37	0.0022		
				2325	0.3000	2.15		1944	1.18	0.0026		
				2400	0.0343	2.17		1948	0.88	0.0029		
			5- 7	30	0.0200	2.18		1952	0.72	0.0032		
								1955	0.71	0.0034		
								2000	0.77	0.0037		
								2004	0.95	0.0040		
								2007	1.39	0.0043		
								2009	1.69	0.0045		
								2012	1.94	0.0049		
								2017	2.02	0.0057		
								2022	1.80	0.0065		
								2033	1.39	0.0079		
								2043	1.12	0.0089		
								2049	1.09	0.0094		
								2100	1.08	0.0104		
								2112	0.81	0.0113		
								2121	0.66	0.0118		
								2132	0.54	0.0123		
								2145	0.45	0.0128		
								2157	0.41	0.0132		
								2205	0.53	0.0135		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.004814.

1969	SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA			WATERSHED #4-4			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969 (CONTINUED)										
							5- 6	2208	0.67	0.0136
								2212	0.86	0.0138
								2216	1.24	0.0141
								2218	1.66	0.0143
								2220	2.00	0.0146
								2222	2.38	0.0149
								2224	2.76	0.0153
								2227	3.40	0.0160
								2230	4.49	0.0169
								2233	5.93	0.0181
								2235	7.41	0.0192
								2237	10.35	0.0206
								2238	12.18	0.0215
								2240	13.81	0.0236
								2241	15.42	0.0248
								2243	17.72	0.0275
								2245	19.79	0.0305
								2248	23.75	0.0357
								2251	29.15	0.0421
								2253	34.61	0.0472
								2255	39.57	0.0531
								2258	47.00	0.0635
								2300	53.43	0.0716
								2303	63.20	0.0856
								2306	74.63	0.1022
								2308	83.66	0.1149
								2310	88.26	0.1286
								2315	94.59	0.1654
								2320	98.91	0.2042
								2326	99.91	0.2520
								2332	96.25	0.2993
								2338	91.07	0.3444
								2342	85.75	0.3728
								2348	76.04	0.4117
								2353	63.95	0.4398
								2400	51.95	0.4724
							5- 7	4	42.96	0.4876
								9	35.79	0.5034
								13	30.31	0.5140
								18	25.15	0.5251
								25	20.83	0.5380
								33	17.55	0.5503
								44	14.23	0.5643
								50	12.67	0.5708
								101	10.29	0.5809
								112	8.34	0.5891
								124	6.64	0.5963
								135	5.19	0.6015
								151	4.00	0.6074
								210	2.99	0.6127
								229	2.29	0.6167
								254	1.71	0.6207
								322	1.38	0.6242
								356	1.09	0.6276
								430	0.87	0.6303
								506	0.71	0.6326
								551	0.57	0.6349
								653	0.45	0.6374
								803	0.37	0.6397
								926	0.29	0.6419
								1120	0.23	0.6442
								1320	0.18	0.6462
								1600	0.12	0.6482
								2020	0.10	0.6506
								2243	0.12	0.6519

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.004814.



EVENT OF MAY 6 - 7, 1969
STILLWATER, OKLAHOMA WATERSHED W-4

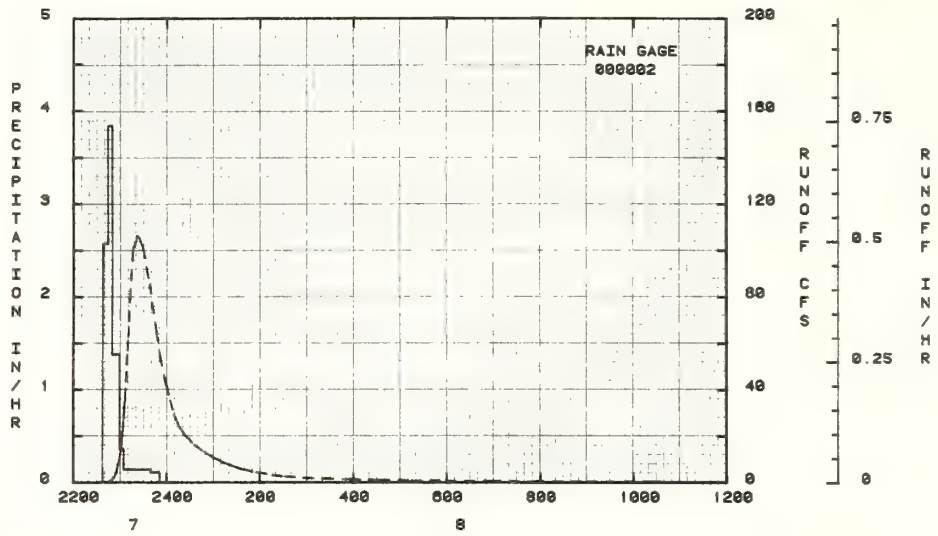
1969 SELECTED RUNOFF EVENT			STILLWATER, OKLAHOMA WATERSHED W-4						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF MAY 7 - 11, 1969									
5-7	RG 000002 0.0	0.180	5-7	RG 000002			5-7	2243	0.12
				2238	0.0	0.0		2245	0.27
				2245	2.5714	0.30		2246	0.46
				2250	3.8402	0.62		2247	0.59
				2300	1.3800	0.85		2248	0.77
				2305	0.3600	0.88		2249	0.94
				2340	0.1371	0.96		2250	1.21
				2351	0.1091	0.98		2251	1.61
								2252	1.96
								2253	2.37
								2254	2.95
								2255	3.72
								2256	4.70
								2257	6.22
								2258	7.78
								2259	9.05
								2300	10.46
								2301	12.64
								2302	16.01
								2303	18.45
								2304	22.37
								2305	27.61
								2306	32.19
								2307	36.49
								2308	43.50
								2309	50.93
								2310	57.25
								2311	62.89
								2312	69.77
								2313	79.40
								2314	87.56
								2316	96.94
								2317	101.05
								2320	103.80
								2322	106.31

WATERSHED CONDITIONS:
100% of area in native grass;
17.3% used as hay meadow in
good condition, and 82.7% in
in pasture in fair condition.

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.004814.

1969	SELECTED RUNOFF EVENT						STILLWATER, OKLAHOMA WATERSHED W-4				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 7 - 11, 1969 (CONTINUED)											
							5- 7	2325	105.37	0.1402	
								2330	100.66	0.1816	
								2334	92.29	0.2126	
								2338	85.40	0.2411	
								2342	76.96	0.2671	
								2347	64.95	0.2955	
								2352	54.26	0.3194	
								2357	45.65	0.3395	
								2400	41.68	0.3500	
							5- 8	5	35.19	0.3654	
								10	29.12	0.3783	
								16	24.20	0.3911	
								25	19.96	0.4070	
								36	16.21	0.4230	
								49	13.09	0.4383	
								59	10.91	0.4479	
								112	8.84	0.4582	
								125	7.09	0.4665	
								139	5.59	0.4736	
								156	4.34	0.4804	
								216	3.27	0.4865	
								233	2.56	0.4905	
								256	2.06	0.4948	
								322	1.60	0.4986	
								356	1.29	0.5026	
								434	1.03	0.5061	
								515	0.81	0.5091	
								559	0.67	0.5117	
								656	0.53	0.5145	
								752	0.45	0.5167	
								900	0.37	0.5189	
								1024	0.29	0.5211	
								1225	0.23	0.5236	
								1500	0.18	0.5262	
								1730	0.12	0.5281	
								2230	0.10	0.5309	
								2400	0.10	0.5317	
							5- 9	800	0.06	0.5349	
								1430	0.04	0.5365	
								2400	0.04	0.5384	
							5-10	1200	0.04	0.5408	
								2230	0.02	0.5424	
								2400	0.02	0.5426	
							5-11	1200	0.02	0.5438	
								2400	0.0	0.5444	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.004814.



EVENT OF MAY 7 - 11, 1969
STILLWATER, OKLAHOMA WATERSHED W-4

RIESEL (WACO), TEXAS WATERSHED C

LOCATION: McLennan Co., Texas; 14 mi. ESE of Waco; Brazos River Basin.

AREA: 579.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED C													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	1.29	2.81	4.27	3.77	2.11	0.55	0.06	2.05	1.08	6.38	1.55	3.88	29.79													
	Q	0.007	1.273	2.465	1.147	0.595	0.0	0.0	0.0	0.069	0.0	1.072	6.627														
STA AV	P	1.96	2.76	2.16	3.93	4.06	3.61	1.52	2.61	3.08	2.88	3.16	2.35	34.07													
	Q	0.455	0.627	0.578	1.048	0.965	0.659	0.178	0.193	0.375	0.314	0.504	0.541	6.437													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date																		
1969		3-23 0.489	3-23 0.424	3-23 0.663	3-23 1.009	3-23 1.108	3-23 1.148	3-23 1.165	3-15 1.882																		
MAXIMUMS FOR PERIOD OF RECORD																											
		3-29 1.580	3-29 1.500	3-29 2.520	3-29 3.550	3-29 3.800	3-29 4.480	9-7 4.780	4-19 8.760																		
		1965	1965	1965	1965	1965	1965	1942	1957																		

NOTES: Watershed conditions: 80% pasture; 12% row grain sorghum; 1% cotton; 2% gravel and paved roads; 5% other. Approximately 90% of other is Johnsongrass and weeds in conservation reserve, but neither tilled nor grazed. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 42.4-6. Precipitation and runoff records began Feb. 1938; station not in operation July 1943 to Mar. 1, 1949; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages 5, 14, and 20. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY AIR TEMPERATURE (degrees F)														RIESEL (WACO), TEXAS WATERSHED C													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min														
1	33 19	46 42	62 41	73 49	73 55	90 74	97 76	95 76	91 71	92 61	60 41	60 36															
2	40 24	50 46	62 40	78 62	77 59	85 60	98 76	97 72	93 71	93 65	69 46	72 41															
3	45 37	72 32	48 37	76 60	78 63	81 65	98 76	96 74	94 72	91 65	49 39	67 42															
4	47 23	54 35	44 31	78 66	73 59	68 57	99 74	99 75	84 68	90 68	61 42	70 44															
5	39 22	57 38	54 33	69 56	75 60	76 58	98 73	97 72	91 69	89 70	63 41	62 43															
6	52 30	57 43	46 41	76 44	75 60	84 60	98 75	92 71	94 74	83 69	72 47	50 42															
7	64 35	75 49	58 37	71 50	81 65	86 65	98 77	96 74	94 73	85 54	79 55	44 38															
8	69 38	78 38	62 38	77 60	72 66	86 63	98 76	99 75	94 74	81 55	81 50	51 35															
9	77 34	55 35	47 24	76 66	77 49	89 68	98 76	99 76	95 74	82 57	85 56	53 37															
10	49 25	58 39	45 28	83 60	73 52	89 65	99 77	100 78	90 72	87 59	83 58	60 40															
11	43 28	67 45	43 30	82 57	80 56	91 66	100 76	103 79	86 70	92 72	75 62	66 36															
12	50 28	64 45	44 32	78 57	79 59	91 70	100 74	106 75	72 60	95 76	82 52	58 37															
13	57 33	68 47	64 32	64 56	78 58	92 69	98 77	105 75	86 59	84 44	74 52	66 41															
14	58 40	52 43	59 38	65 51	80 63	92 68	99 76	105 78	88 62	59 42	71 40	72 48															
15	63 52	51 41	55 43	72 56	78 65	91 64	100 78	103 74	92 67	65 45	50 30	69 45															
16	62 56	45 36	47 39	80 60	81 64	80 62	102 71	93 74	92 73	78 48	65 41	72 41															
17	70 58	40 33	49 40	76 61	77 63	87 66	95 73	101 75	94 68	69 51	74 53	67 43															
18	71 45	43 29	51 45	74 49	75 59	91 69	97 75	102 76	88 66	72 53	78 44	68 58															
19	53 40	52 33	74 49	72 49	75 58	93 72	98 77	101 75	89 68	83 54	45 34	71 53															
20	51 43	45 40	79 50	75 56	84 63	96 75	99 78	99 76	88 68	84 58	52 33	58 47															
21	64 45	48 41	67 45	68 53	85 64	98 77	99 73	100 75	90 67	87 64	62 35	55 47															
22	78 43	54 39	71 51	80 59	88 67	98 79	97 75	99 78	88 68	84 55	65 40	65 40															
23	83 45	56 38	68 53	81 60	88 69	98 80	100 79	103 70	87 64	79 52	72 51	69 41															
24	58 23	64 40	72 48	82 55	89 67	99 74	101 78	91 72	79 63	71 52	70 48	64 42															
25	39 23	58 40	54 38	75 54	88 67	98 79	101 78	91 72	83 64	73 52	51 45	68 43															
26	54 28	69 47	57 37	78 59	88 67	97 79	100 77	87 72	89 65	78 55	69 48	56 34															
27	61 45	67 52	62 41	77 60	87 66	96 73	100 78	85 73	89 62	82 53	67 51	60 39															
28	73 61	77 38	71 47	70 50	88 67	98 76	92 77	86 70	91 65	54 43	56 37	70 52															
29	75 65		75 56	69 52	89 69	97 73	103 76	90 72	92 64	51 45	48 38	52 36															
30	71 54		73 52	76 56	90 68	97 74	97 72	90 68	91 65	61 50	57 33	38 30															
31	57 44		58 46		92 70		97 76	89 68		59 43		35 25															
AV.	58 38	58 40	59 41	75 56	81 62	90 69	99 76	97 74	89 68	78 56	66 45	61 41															
MEAN	48.3	49.1	49.8	65.6	71.8	79.9	87.2	85.4	78.4	67.2	55.5	51.1															
STA AV	57 37	62 40	69 47	77 56	83 63	89 70	94 72	94 72	88 66	81 57	68 46	61 39															

NOTES: Temperature data taken daily with maximum and minimum thermometers. Readings were taken at 0800 of the day shown. STA AV based on 31 yr (1939-1969) period.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED C	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.03	0.02E	0.0	0.0	0.13E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.14	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0		
3	0.0	0.0	0.0	0.0	0.01	0.36	0.0	0.0	0.04E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.29	0.12E	0.0	0.0	0.24	0.0	0.0	0.0	0.0		
5	0.0	0.05E	0.37	0.03E	1.15	0.0	0.0	0.13	0.0	0.06E	0.0	2.21		
6	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.01E	0.0	0.88		
7	0.0	0.28	0.08E	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.57	0.0	0.0	0.0	0.0	0.0	1.41	0.0	0.0		
13	0.0	0.36	0.0	0.0	0.03E	0.18	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.15	0.32	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.19	0.0	0.10E	0.0	0.0	0.0	0.00E	0.0	0.0	0.0		
16	0.26E	0.0	0.0	0.0	0.0	0.0	0.05E	0.0	0.28	0.0	0.07	0.0		
17	0.0	0.0	0.15	0.65	0.17E	0.0	0.0	0.0	0.0	0.01E	0.40	0.0		
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.0		
19	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.10E	0.0	0.06E	0.0	0.01E	0.01E	0.0	0.0 E	0.0	0.0	0.0		
21	0.0	0.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.58	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.37	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.08	0.0		
27	0.0	0.0	0.0	1.16	0.0	0.0	0.0	0.23	0.0	1.24	0.11	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.15E	0.0	0.95	0.0	0.18		
29	0.31	0.0	0.0	0.0	0.07E	0.0	0.0	0.30	0.0	0.89	0.0	0.60		
30	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	1.81	0.0	0.0 S		
31	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.29	2.81	4.27	3.77	2.11	0.55	0.06	2.05	1.08	6.38	1.55	3.88		
STA AV	1.96	2.76	2.16	3.93	4.06	3.61	1.52	2.61	3.08	2.88	3.16	2.35		

NOTES: Precipitation values are Thiessen weighted average of rain gages 5, 14, and 20. Records began Dec. 1937; station not in operation July 1943 to Mar. 1, 1949; part-year amounts not included in averages. STA AV based on 24 yr period.

1969 MEAN DAILY DISCHARGE (cfs)													RIESEL (WACO), TEXAS WATERSHED C	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.006	0.239	0.017	0.0	0.051	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.010	0.086	0.676	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.009	0.030	0.820	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.001	0.012	0.177	0.013	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.002	0.010	1.683	0.030	12.643	0.0	0.0	0.0	0.0	0.0	0.0	9.491		
6	0.0	0.006	1.328	0.011	0.963	0.0	0.0	0.0	0.0	0.0	0.0	15.992		
7	0.0	0.004	0.265	0.006	0.348	0.0	0.0	0.0	0.0	0.0	0.0	0.323		
8	0.005	0.183	0.148	0.0	0.289	0.0	0.0	0.0	0.0	0.0	0.0	0.041		
9	0.0	0.071	0.062	0.0	0.127	0.0	0.0	0.0	0.0	0.0	0.0	0.014		
10	0.0	0.027	0.034	0.0	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.010		
11	0.0	0.017	0.022	0.0	0.036	0.0	0.0	0.0	0.0	0.0	0.0	0.002		
12	0.0	0.010	0.017	15.121	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.136	0.010	1.624	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004		
14	0.0	14.076	0.011	0.251	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005		
15	0.0	1.896	20.451	0.079	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.003	0.402	2.541	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.0	0.155	0.788	3.745	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.074	1.597	0.346	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.049	0.397	0.065	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.001	0.058	0.127	0.025	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	0.0	11.099	0.055	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	1.582	0.049	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.363	27.747	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.142	0.665	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.087	0.144	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.064	0.060	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.049	0.032	5.804	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.006		
28	0.0	0.032	0.022	0.605	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004		
29	0.001	0.010	0.010	0.075	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.008		
30	0.006	0.010	0.010	0.029	0.0	0.0	0.0	0.0	0.0	1.652	0.0	0.140		
31	0.116	0.009	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.014	0.0	0.051		
MEAN	0.0052	1.1056	1.9346	0.9297	0.4672	0.0	0.0	0.0	0.0	0.0538	0.0	0.8416		
INCHES	0.007	1.273	2.465	1.147	0.595	0.0	0.0	0.0	0.0	0.069	0.0	1.072		
STA AV	0.455	0.627	0.578	1.048	0.965	0.659	0.178	0.193	0.375	0.314	0.504	0.541		

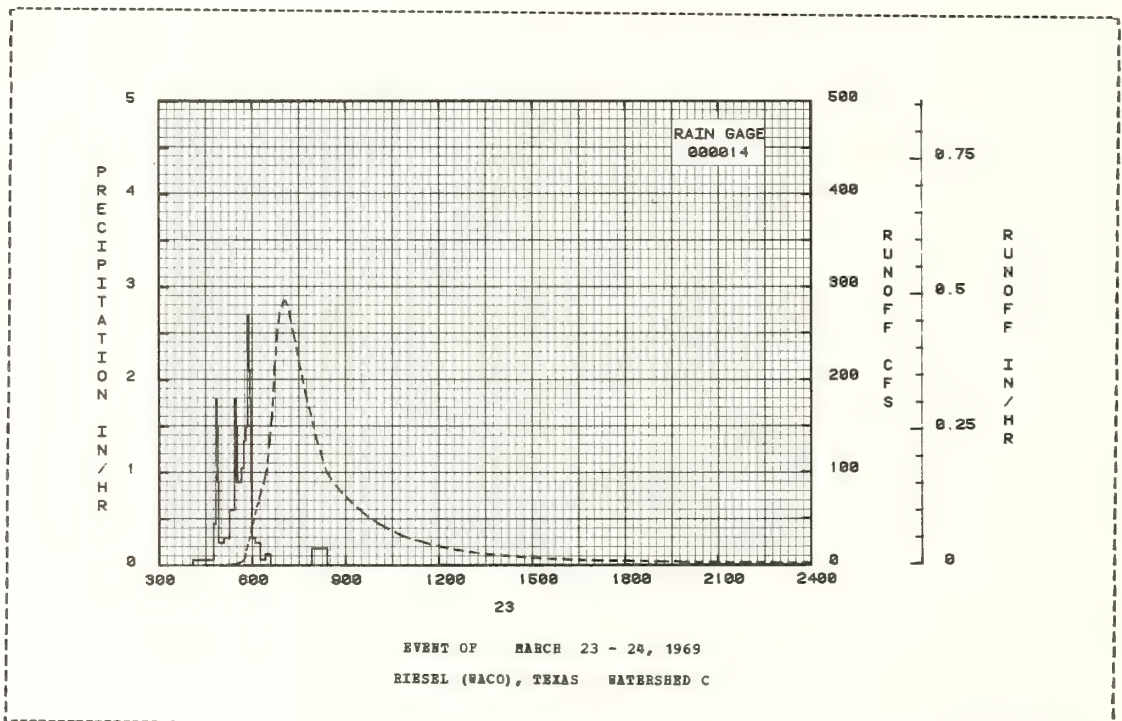
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.041107. Records began Dec. 1937; station not in operation July 1943 to Mar. 1, 1949; part-year amounts not included in averages. STA AV based on 24 yr period.

1969 SELECTED RUNOFF EVENT			BIESEL (WACO), TEXAS WATERSHED C						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
									Acc. (inches)
EVENT OF MARCH 23 - 24, 1969									
RG 000014			RG 000014						
3-23	0.0	0.002	3-23	405	0.0	0.0	3-23	423	0.370
				415	0.0600	0.01		443	0.400
				425	0.0600	0.02		449	0.410
				445	0.0600	0.04		453	0.460
				449	0.4500	0.07		458	0.530
WATERSHED CONDITIONS: 80% pasture, all classes; 12% seed bed prepared for row grain sorghum; 1% seed bed prepared for cotton; 2% gravel and paved roads; 5% other. Approx. 90% of other is Johnsongrass and weeds in conservation reserve, neither tilled nor grazed.				451	1.8000	0.13		503	0.650
				453	1.5000	0.18		513	0.930
				455	0.9000	0.21		518	1.130
				505	0.2400	0.25		523	1.360
				515	0.3000	0.30		528	1.740
				525	0.6000	0.40		533	2.520
				527	1.8000	0.46		537	3.460
				529	0.9000	0.49		541	4.630
				531	1.5000	0.54		543	6.150
				535	0.9000	0.60		545	8.400
				539	0.9000	0.66		547	12.170
				543	1.0500	0.73		549	17.250
				547	1.3500	0.82		551	22.310
				551	1.5000	0.92		553	26.910
				553	2.6999	1.01		555	31.010
				555	2.1001	1.08		557	36.240
				557	1.8000	1.14		559	41.600
				559	0.9000	1.17		601	45.430
				605	0.3000	1.20		603	49.800
				615	0.2400	1.24		605	55.300
				625	0.0600	1.25		607	59.910
				635	0.1200	1.27		609	63.640
				755	0.0	1.27		611	67.780
				825	0.1800	1.36		613	72.620
								618	81.550
								623	91.560
								628	104.970
								633	131.450
								635	143.540
								637	158.140
								639	173.280
								641	190.810
								643	212.460
								648	247.140
								653	272.770
								658	280.460
								701	285.680
								703	285.680
								708	280.890
								713	265.820
								723	241.720
								733	211.420
								743	184.510
								753	162.590
								803	138.260
								813	119.730
								823	101.000
								833	92.480
								843	84.650
								853	77.860
								903	72.370
								923	61.920
								943	52.540
								1003	44.890
								1023	38.810
								1043	33.230
								1103	28.650
								1123	25.540
								1143	22.420
								1203	19.590
								1233	16.230
								1303	13.610
								1333	11.710
								1403	10.100
								1433	8.850
								1503	7.570
								1533	6.580
								1603	5.830
								1703	4.750
								1803	3.910

NOTES: To convert runoff in CPS to IN/HR, multiply by 0.001713.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED C								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)											
							3-23	1903	3.250	1.1194	
								1923	3.070	1.1212	
								2003	2.750	1.1245	
								2103	2.350	1.1289	
								2203	2.090	1.1327	
								2303	1.770	1.1360	
								2400	1.590	1.1387	
							3-24	103	1.420	1.1414	
								203	1.290	1.1437	
								303	1.180	1.1458	
								403	1.080	1.1477	
								503	1.000	1.1495	
								603	0.910	1.1511	
								703	0.830	1.1526	
								903	0.690	1.1552	
								1000	0.650	1.1563	
								1130	0.590	1.1579	
								1230	0.530	1.1589	
								1430	0.460	1.1606	
								1630	0.390	1.1621	
								1830	0.340	1.1634	
								2030	0.300	1.1645	
								2230	0.260	1.1655	
								2400	0.250	1.1662	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001713.



BIESEL (WACO), TEXAS WATERSHED D

LOCATION: McLennan Co., Texas; 14 mi. ESE of Waco; Brazos River Basin.

AREA: 1110.00 acres 1.73 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)							BIESEL (WACO), TEXAS WATERSHED D						
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969 P	1.20	2.74	4.25	3.86	1.99	0.55	0.04	2.10	1.11	6.22	1.58	3.85	29.53
Q	0.003	1.035	2.247	0.974	0.480	0.0	0.0	0.0	0.0	0.113	0.0	1.179	6.030
STA AV P	2.04	2.75	2.24	3.90	3.97	3.66	1.54	2.48	3.00	2.74	3.06	2.35	33.73
Q	0.490	0.619	0.612	1.094	1.068	0.664	0.188	0.211	0.358	0.317	0.478	0.517	6.617
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS													
Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days	
Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	3-23	0.371	3-23	0.345	3-23	0.615	3-23	0.962	3-23	1.052	12- 5	1.116	12- 5
												1.173	3-15
MAXIMUMS FOR PERIOD OF RECORD													
	3-29	2.110	3-29	1.930	3-29	3.150	3-29	4.590	3-29	4.880	3-29	5.630	3-29
	1965		1965		1965		1965		1965		1965		1965
												5.690	4-19
													9.660
													1957

NOTES: Watershed conditions: 52% pasture; 5% tilled, but not planted; 11% cotton; 3% corn; 8% row grain sorghum; 2% gravel and paved roads; 19% other. Approximately 90% of other is Johnsongrass and weeds in conservation reserve, but neither tilled nor grazed. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 42.4-6. Precipitation and runoff records began Dec. 1937; station not in operation July 1943 to Mar. 1, 1949; part-year amounts not included in averages. Precipitation data from Thiessen method using rain gages 5, 14, 20, and 26A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)							BIESEL (WACO), TEXAS WATERSHED D						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.03	0.02E	0.0	0.0	0.15E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.14	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0
3	0.0	0.0	0.0	0.0	0.01	0.35	0.0	0.0	0.05E	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.33	0.11E	0.0	0.0	0.24	0.0	0.0	0.0	0.0	0.0
5	0.0	0.05E	0.38	0.03E	1.15	0.0	0.0	0.12	0.0	0.06E	0.0	2.22	
6	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.03E	0.0	0.83	
7	0.0	0.22E	0.08E	0.0	0.14E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	1.59	0.0	0.0 E	0.0	0.0	0.0	1.38	0.0	0.0	0.0
13	0.0	0.37	0.0	0.0	0.02E	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	1.15	0.32	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	1.20	0.0	0.07E	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0
16	0.20E	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.28	0.0	0.05	0.0	0.0
17	0.0	0.0	0.15	0.66	0.14E	0.0	0.0	0.0	0.0	0.01E	0.36	0.0	0.0
18	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.0	0.0
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.11E	0.0	0.06E	0.0	0.03E	0.01E	0.0	0.0 E	0.0	0.0	0.0	0.0
21	0.0	0.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.58	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	1.34	0.0	0.0	0.0	0.0	0.0	0.51	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.09	0.0	0.0
27	0.0	0.0	0.0	1.17	0.0	0.0	0.0	0.24	0.0	1.33	0.11	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.15E	0.0	0.98	0.0	0.16	0.0
29	0.27	0.0	0.0	0.0	0.04E	0.0	0.0	0.38	0.0	0.60	0.0	0.66	0.0
30	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	1.84	0.0	0.0 S	0.0
31	0.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.20	2.74	4.25	3.86	1.99	0.55	0.04	2.10	1.11	6.22	1.58	3.89	
STA AV	2.04	2.75	2.24	3.90	3.97	3.66	1.54	2.48	3.00	2.74	3.06	2.35	

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 5, 14, 20, and 26A. Records began Dec. 1937; station not in operation July 1943 to Mar. 1, 1949; part-year amounts not included in averages. STA AV based on 25 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED D												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.292	0.022	0.009	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.007	0.116	0.772	0.005	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.010	0.035	1.192	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.006	0.015	0.265	0.061	0.008	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.010	2.369	0.049	19.769	0.0	0.0	0.0	0.0	0.0	0.0	16.208
6	0.0	0.010	2.113	0.014	1.413	0.0	0.0	0.0	0.0	0.0	0.0	37.934
7	0.0	0.007	0.412	0.006	0.505	0.0	0.0	0.0	0.0	0.0	0.0	0.670
8	0.006	0.121	0.239	0.0	0.432	0.0	0.0	0.0	0.0	0.0	0.0	0.059
9	0.003	0.083	0.091	0.0	0.181	0.0	0.0	0.0	0.0	0.0	0.0	0.012
10	0.0	0.030	0.046	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.001
11	0.0	0.012	0.030	0.0	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.009	0.021	25.314	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.039	0.012	2.605	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	20.183	0.014	0.371	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	2.958	35.492	0.106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.623	4.390	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.232	1.483	6.810	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.105	2.879	0.511	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.072	0.647	0.084	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.101	0.200	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	19.259	0.089	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	2.774	0.096	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.623	50.394	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.244	1.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.131	0.203	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.092	0.086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.074	0.050	8.329	0.0	0.0	0.0	0.0	0.0	0.013	0.0	0.0
28	0.0	0.042	0.027	0.898	0.0	0.0	0.0	0.0	0.0	0.028	0.0	0.0
29	0.001		0.020	0.102	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.005
30	0.025		0.012	0.027	0.0	0.0	0.0	0.0	0.0	5.182	0.0	0.032
31	0.077		0.010		0.0		0.0	0.0		0.025		0.046
MEAN	0.0044	1.7246	3.3798	1.5134	0.7223	0.0	0.0	0.0	0.0	0.1695	0.0	1.7730
INCHES	0.003	1.035	2.247	0.974	0.480	0.0	0.0	0.0	0.0	0.113	0.0	1.179
STA AV	0.490	0.619	0.612	1.094	1.068	0.664	0.188	0.211	0.358	0.317	0.478	0.517

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.021442. Records began Dec. 1937; station not in operation July 1943 to Mar. 1, 1949; part-year amounts not included in averages. STA AV based on 25 yr period.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED D									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF MARCH 23 - 24, 1969												
3-23	EG 000014		3-23	EG 000014			3-23					
	0.0	0.001		405	0.0	0.0		427	0.410	0.0		
				415	0.0600	0.01		447	0.480	0.0001		
				425	0.0600	0.02		452	0.510	0.0001		
				445	0.0600	0.04		457	0.640	0.0001		
				449	0.4500	0.07		502	0.760	0.0002		
WATERSHED CONDITIONS:				451	1.8000	0.13		507	0.870	0.0003		
52% pasture, all classes;				453	1.5000	0.18		512	0.980	0.0004		
5% tilled, but not planted;				455	0.9000	0.21		517	1.120	0.0005		
3% seed bed prepared for corn;				505	0.2400	0.25		522	1.270	0.0006		
11% seed bed prepared for				515	0.3000	0.30		527	1.530	0.0007		
cotton; 8% seed bed prepared												
for grain sorghum; 2% gravel				525	0.6000	0.40		531	1.860	0.0008		
and paved roads; 19% other.				527	1.8000	0.46		533	2.120	0.0009		
Approx. 90% of other is				529	0.9000	0.49		535	2.550	0.0010		
Johnsongrass and weeds in				531	1.5000	0.54		537	3.140	0.0011		
conservation reserve,				535	0.9000	0.60		539	3.780	0.0012		
neither tilled nor grazed.												
				539	0.9000	0.66		541	4.730	0.0013		
				543	1.0500	0.73		543	5.640	0.0015		
				547	1.3500	0.82		545	6.600	0.0017		
				551	1.5000	0.92		547	8.340	0.0019		
				553	2.6999	1.01		549	10.770	0.0022		
				555	2.1001	1.08		551	13.290	0.0026		
				557	1.8000	1.14		553	18.460	0.0031		
				559	0.9000	1.17		555	22.730	0.0037		
				605	0.3000	1.20		557	27.130	0.0044		
				615	0.2400	1.24		559	32.280	0.0053		
				625	0.0600	1.25		601	38.000	0.0064		
				635	0.1200	1.27		603	44.000	0.0076		
				755	0.0	1.27		605	51.000	0.0090		
				825	0.1800	1.36		607	60.000	0.0106		
								609	72.000	0.0126		
								611	87.500	0.0150		
								613	105.000	0.0179		
								615	126.000	0.0214		
								617	143.000	0.0254		
								619	163.000	0.0300		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000893.

1969	SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED 1						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)										
3-23							621		180.000	0.0351
							623		190.000	0.0406
							625		220.000	0.0467
							627		241.000	0.0536
							629		257.500	0.0610
							631		273.000	0.0689
							633		292.000	0.0773
							637		312.500	0.0953
							642		332.000	0.1193
							647		340.000	0.1443
							657		369.000	0.1971
							707		392.500	0.2537
							717		407.500	0.3133
							722		412.500	0.3438
							727		415.000	0.3747
							732		395.000	0.4048
							737		380.000	0.4336
							747		364.000	0.4890
							757		332.000	0.5408
							807		302.500	0.5880
							817		271.000	0.6307
							827		239.000	0.6687
							837		207.000	0.7019
							847		183.000	0.7310
							857		157.500	0.7564
							907		142.000	0.7787
							917		129.000	0.7989
							927		119.000	0.8174
							937		110.000	0.8344
							947		102.000	0.8502
							957		91.000	0.8646
							1007		84.000	0.8776
							1017		76.000	0.8895
							1027		68.000	0.9002
							1037		63.000	0.9059
							1047		57.000	0.9188
							1057		54.000	0.9271
							1107		50.000	0.9348
							1127		44.000	0.9488
							1147		40.000	0.9613
							1207		35.000	0.9725
							1227		29.520	0.9821
							1247		26.940	0.9905
							1307		23.790	0.9981
							1327		21.920	1.0049
							1347		20.260	1.0112
							1407		18.370	1.0170
							1437		16.010	1.0247
							1507		13.810	1.0314
							1537		12.150	1.0372
							1607		10.560	1.0423
							1637		9.320	1.0467
							1707		8.240	1.0506
							1807		6.600	1.0572
							1907		5.460	1.0626
							2007		4.580	1.0671
							2107		3.980	1.0709
							2207		3.480	1.0742
							2307		3.090	1.0771
							2400		2.790	1.0794
3-24							107		2.440	1.0820
							207		2.210	1.0841
							307		2.020	1.0860
							407		1.890	1.0877
							507		1.720	1.0893
							607		1.590	1.0908
							707		1.450	1.0922
							807		1.290	1.0934
							907		1.190	1.0945
							1004		1.020	1.0954
							1104		0.920	1.0963
							1204		0.870	1.0971
							1304		0.790	1.0978
							1404		0.720	1.0985
							1504		0.670	1.0991

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000893.

RIESEL (WACO), TEXAS WATERSHED G

LOCATION: McLennan and Falls Counties, Texas; 16 mi. S.E. of Waco; Brazos River Basin.

AREA: 4380.00 acres 6.84 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										RIESEL (WACO), TEXAS WATERSHED G							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	F	1.05	2.68	4.33	4.06	1.70	0.44	0.06	2.17	1.32	6.13	1.72	3.91	29.55			
	Q	0.001	0.798	2.079	1.036	0.343	0.0	0.0	0.0	0.0	0.056	0.0	0.845	5.158			
STA AV	P	2.28	2.89	2.20	3.67	3.55	4.55	1.69	2.90	3.18	2.86	3.14	2.66	35.59			
	Q	0.729	0.793	0.657	0.750	0.785	1.039	0.190	0.194	0.358	0.197	0.537	0.559	6.788			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days	
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-23	0.130	3-23	0.127	3-23	0.240	3-23	0.557	3-23	0.740	3-15	0.843	3-15	0.936	3-15	1.429
MAXIMUMS FOR PERIOD OF RECORD																	
		3-29	0.950	3-29	0.910	3-29	1.720	3-29	3.390	3-29	3.940	3-29	4.030	3-29	4.740	11-22	4.820
		1965		1965		1965		1965		1965		1965		1965		1940	

NOTES: Watershed conditions: 34% pasture; 2% tilled, but not planted; 8% cotton; 4% corn; 5% fall planted small grain, largely oats; 6% sorghum; 2% gravel and paved roads; 39% other. Approximately 90% of other is Johnsongrass and weeds in conservation reserve, but neither tilled nor grazed. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 42.4-6. Precipitation and runoff records began Jan. 1938; station not in operation July 1943 to July 1, 1957; part-year amounts not included in averages. Precipitation data from Thiessen method using rain gages 5, 14, 20, 26A, 30A, 43A, 48A, 56A, 65A, 70, 74A, 84A, and 89. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED G	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.03	0.02E	0.0	0.0	0.14E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.16	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	0.17		
3	0.0	0.0	0.0	0.0	0.02E	0.34	0.0	0.0	0.11E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.41	0.10E	0.0	0.0	0.12E	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.39	0.04E	0.98	0.0	0.0	0.10E	0.0	0.06E	0.0	2.24		
6	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.0	0.0	0.02E	0.0	0.77		
7	0.0	0.12E	0.14E	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.70	0.0	0.0 E	0.0	0.0	0.0	1.36	0.0	0.0		
13	0.0	0.41	0.0	0.0	0.02E	0.08	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.18	0.32	0.0	0.0	0.0	0.0	0.12E	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.35	0.0	0.02E	0.0	0.0	0.0	0.00E	0.0	0.0	0.0		
16	0.15E	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	0.30	0.0	0.04	0.0		
17	0.0	0.0	0.15	0.67	0.09E	0.0	0.0	0.0	0.0	0.01E	0.32	0.0		
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0		
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.14E	0.0	0.06E	0.0	0.01E	0.05E	0.0	0.11E	0.0	0.0	0.0		
21	0.0	0.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.79	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.18	0.0	0.0	0.0	0.0	0.0	0.52	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15E	0.0	0.0	0.08	0.0		
27	0.0	0.0	0.0	1.16	0.0	0.0	0.00E	0.30	0.0	1.48	0.13	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.15E	0.0	1.00	0.0	0.18E		
29	0.19E	0.0	0.0	0.0	0.01E	0.0	0.0	0.42	0.0	0.40	0.0	0.71		
30	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.0	1.80	0.0	0.0 S		
31	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.05	2.68	4.33	4.06	1.70	0.44	0.06	2.17	1.32	6.13	1.72	3.91		
STA AV	2.28	2.89	2.20	3.67	3.55	4.55	1.69	2.90	3.18	2.86	3.14	2.66		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 5, 14, 20, 26A, 30A, 43A, 48A, 56A, 65A, 70, 74A, 84A, and 89. Records began Jan. 1938; station not in operation July 1943 to July 1, 1957; part-year amounts not included in averages. STA AV based on 17 yr period.

1969 MEAN DAILY DISCHARGE (cfs)													BIESEL (WACO), TEXAS WATERSHED G	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.06	0.17	0.16	0.11	0.0	0.0	0.0	0.0	0.0	0.00	0.0		
2	0.00	0.04	1.47	0.12	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.02	0.08	4.39	0.10	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.05	0.04	1.37	0.83	0.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.01	0.02	7.17	1.32	49.24	0.0	0.0	0.0	0.0	0.0	0.0	35.04		
6	0.0	0.02	11.34	0.32	6.93	0.0	0.0	0.0	0.0	0.0	0.0	112.78		
7	0.0	0.01	2.19	0.14	2.51	0.0	0.0	0.0	0.0	0.0	0.0	5.37		
8	0.00	0.01	2.28	0.09	2.34	0.0	0.0	0.0	0.0	0.0	0.0	0.62		
9	0.02	0.0	0.72	0.08	1.32	0.0	0.0	0.0	0.0	0.0	0.0	0.14		
10	0.00	0.00	0.33	0.06	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.05		
11	0.0	0.02	0.21	0.03	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
12	0.0	0.02	0.19	91.32	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
13	0.0	0.02	0.14	18.54	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
14	0.0	55.93	0.12	2.75	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
15	0.0	14.32	146.52	0.88	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
16	0.00	2.65	25.26	0.40	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
17	0.01	1.08	7.17	31.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
18	0.01	0.52	11.94	3.08	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
19	0.0	0.37	3.20	0.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
20	0.00	0.51	0.94	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
21	0.0	50.54	0.56	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
22	0.0	14.48	0.80	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
23	0.0	2.91	144.59	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00		
24	0.0	1.31	6.26	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.70	1.30	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.50	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.41	0.39	31.84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.26	0.29	5.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00		
29	0.0		0.22	0.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16		
30	0.08		0.20	0.21	0.0	0.0	0.0	0.0	0.0	9.56	0.0	0.97		
31	0.05		0.19		0.0		0.0	0.0		0.28		0.21		
MEAN	0.008	5.246	12.338	6.353	2.039	0.0	0.0	0.0	0.0	0.330	0.0	5.017		
INCHES	0.001	0.798	2.079	1.036	0.343	0.0	0.0	0.0	0.0	0.056	0.0	0.845		
STA AV	0.729	0.793	0.657	0.750	0.785	1.039	0.190	0.194	0.358	0.197	0.537	0.559		

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.005434. Records began Jan. 1938; station not in operation July 1943 to July 1, 1957; part-year amounts not included in averages. STA AV based on 17 yr period.

1969			SELECTED RUNOFF EVENT			BIESEL (WACO), TEXAS WATERSHED G								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF								
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.				
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)				
EVENT OF MARCH 23 - 24, 1969														
RG 000014			RG 000014											
3-23	0.0	0.003	3-23	405	0.0	0.0	3-23	500	3.370	0.0				
				415	0.0600	0.01		515	3.570	0.0002				
				425	0.0600	0.02		530	3.890	0.0004				
				445	0.0600	0.04		535	4.150	0.0005				
				449	0.4500	0.07		540	4.380	0.0006				
WATERSHED CONDITIONS: 34% pasture, all classes; 5% tilled, but not planted; 2% gravel and paved roads; 39% other. Approx. 90% of other is Johnsongrass and weeds in conservation reserve, neither tilled nor grazed.				451	1.8000	0.13		545	5.180	0.0007				
				453	1.5000	0.18		550	6.240	0.0008				
				455	0.9000	0.21		555	8.660	0.0009				
				505	0.2400	0.25		600	19.140	0.0012				
				515	0.3000	0.30		605	35.500	0.0017				
				525	0.6000	0.40		610	40.000	0.0024				
				527	1.8000	0.46		615	56.000	0.0033				
				529	0.9000	0.49		620	99.000	0.0048				
				531	1.5000	0.54		625	123.000	0.0069				
				535	0.9000	0.60		630	148.000	0.0095				
				539	0.9000	0.66		635	181.000	0.0126				
				543	1.0500	0.73		640	215.000	0.0163				
				547	1.3500	0.82		645	225.000	0.0205				
				551	1.5000	0.92		650	279.000	0.0253				
				553	2.6999	1.01		655	296.000	0.0307				
				555	2.1001	1.08		700	311.000	0.0364				
				557	1.8000	1.14		705	322.000	0.0424				
				559	0.9000	1.17		710	332.000	0.0486				
				605	0.3000	1.20		715	335.000	0.0549				
				615	0.2400	1.24		730	351.000	0.0743				
				625	0.0600	1.25		745	351.000	0.0942				
				635	0.1200	1.27		800	332.000	0.1135				
				755	0.0	1.27		815	330.000	0.1322				
				825	0.1800	1.36		830	346.000	0.1513				
								845	368.000	0.1715				
								850	379.000	0.1785				
								855	392.000	0.1858				
								900	406.000	0.1933				
								905	424.000	0.2011				
								915	452.000	0.2176				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002264.

1969			SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS			WATERSHED G		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)											
3-23								920	468.000	0.2263	
								925	486.000	0.2353	
								930	498.000	0.2446	
								935	510.000	0.2541	
								945	538.000	0.2739	
								1000	572.000	0.3053	
								1015	575.000	0.3378	
								1025	576.000	0.3595	
								1045	530.000	0.4013	
								1100	500.000	0.4305	
								1115	464.000	0.4578	
								1130	419.000	0.4828	
								1145	381.000	0.5054	
								1200	346.000	0.5260	
								1215	313.000	0.5447	
								1230	289.000	0.5617	
								1245	266.000	0.5774	
								1300	252.000	0.5921	
								1315	235.000	0.6059	
								1330	220.000	0.6188	
								1345	206.000	0.6309	
								1400	192.000	0.6422	
								1415	178.000	0.6527	
								1430	164.000	0.6624	
								1445	151.000	0.6713	
								1500	139.000	0.6795	
								1515	129.000	0.6871	
								1530	120.000	0.6941	
								1545	110.000	0.7006	
								1600	102.000	0.7066	
								1615	94.000	0.7121	
								1630	86.000	0.7172	
								1645	81.000	0.7219	
								1700	75.000	0.7263	
								1715	69.000	0.7304	
								1730	65.000	0.7342	
								1745	59.000	0.7377	
								1800	55.000	0.7409	
								1815	51.000	0.7439	
								1830	48.000	0.7467	
								1845	45.000	0.7493	
								1900	43.000	0.7518	
								1930	40.000	0.7565	
								1945	38.000	0.7587	
								2000	37.000	0.7608	
								2015	35.500	0.7629	
								2030	34.000	0.7649	
								2045	32.000	0.7668	
								2100	30.980	0.7686	
								2115	28.700	0.7703	
								2130	25.260	0.7718	
								2200	22.580	0.7745	
								2230	20.600	0.7769	
								2300	19.070	0.7791	
								2330	17.710	0.7812	
								2400	16.680	0.7831	
								100	14.170	0.7866	
								200	12.720	0.7896	
								300	11.440	0.7923	
								430	9.680	0.7959	
								600	8.380	0.7990	
								730	7.380	0.8017	
								900	6.550	0.8041	
								1030	5.710	0.8062	
								1200	5.160	0.8080	
								1330	4.560	0.8097	
								1500	4.030	0.8112	
								1630	3.570	0.8125	
								1800	3.180	0.8136	
								1930	2.900	0.8146	
								2100	2.610	0.8155	
								2230	2.360	0.8163	
								2400	2.150	0.8171	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002264.

RIESEL (WACO), TEXAS WATERSHED W-1

LOCATION: Falls Co., Texas; 19 mi. SE of Waco; Brazos River Basin.

AREA: 174.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED W-1	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	1.06	2.61	4.04	4.44	1.48	0.35	0.05	2.85	1.52	6.48	1.87	3.74	30.50	
	Q	0.064	0.332	1.168	0.923	0.182	0.007	0.0	0.0	0.0	0.074	0.003	0.899	3.652	
STA AV	P	2.29	2.73	2.56	4.04	4.33	3.39	1.54	2.11	2.48	2.62	3.01	2.58	33.69	
	Q	0.511	0.611	0.673	1.052	1.256	0.637	0.120	0.094	0.141	0.181	0.395	0.463	6.134	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge Rate		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days	
		Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-23	0.216	3-23	0.190	3-23	0.292	3-23	0.404	3-23	0.434	12- 5	0.646	12- 5	0.746
MAXIMUMS FOR PERIOD OF RECORD															
		5- 1	4.510	5- 1	2.990	5- 1	5.570	5- 1	6.310	5- 1	6.920	5- 1	7.050	4-30	9.200
		1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944

NOTES: Watershed conditions: 49% fall planted oats; 47% pasture; 3% roads; and 1% other. Approximately 90% of other is Johnsongrass and weeds in conservation reserve; but neither tilled nor grazed. Area reported as 174 acres beginning 1969. Previously reported as 175 acres prior publications. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 42.6-6 (Revised). Precipitation and runoff records began July 1937; part-year amounts not included in averages. Precipitation data from Thiessen method using rain gages 75A, 89, W-2, W-2A, and W-5A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)														RIESEL (WACO), TEXAS WATERSHED W-1	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.04	0.02E	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.17	0.0	0.51	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.18	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.02E	0.35	0.0	0.0	0.10E	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.53	0.04E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.38	0.06E	0.86	0.0	0.0	0.07E	0.0	0.05E	0.0	0.0	2.32		
6	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58		
7	0.0	0.07E	0.19	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	0.0	1.33	0.0	0.0	0.0		
13	0.0	0.38	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.13	0.26	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.25	0.0	0.01E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	0.0		
16	0.20	0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.67	0.0	0.05	0.0	0.0		
17	0.0	0.0	0.17	0.72	0.09E	0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.0		
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.0	0.0		
19	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.11E	0.0	0.03E	0.0	0.0	0.05E	0.0	0.02E	0.0	0.0	0.0	0.0		
21	0.0	0.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.49	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.0	0.96	0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.06	0.0	0.0		
27	0.0	0.0	0.0	1.21	0.0	0.0	0.00E	0.33	0.0	1.46	0.16	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.34	0.0	1.05	0.0	0.13E	0.0		
29	0.12E	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.37	0.0	0.71	0.0		
30	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.12E	0.0	2.22	0.0	0.0 S	0.0		
31	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.06	2.61	4.04	4.44	1.48	0.35	0.05	2.85	1.52	6.48	1.87	3.74			
STA AV	2.29	2.73	2.56	4.04	4.33	3.39	1.54	2.11	2.48	2.62	3.01	2.58			

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 75A, 89, W-2, W-2A, and W-5A. Records began July 1937; part-year amounts not included in averages. STA AV based on 32 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.016	0.020	0.022	0.036	0.034	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.026	0.015	0.142	0.030	0.034	0.004	0.0	0.0	0.0	0.0	0.0	0.0
3	0.019	0.010	0.075	0.032	0.030	0.012	0.0	0.0	0.0	0.0	0.0	0.0
4	0.014	0.010	0.036	0.033	0.035	0.014	0.0	0.0	0.0	0.0	0.0	0.0
5	0.020	0.013	0.211	0.079	0.642	0.007	0.0	0.0	0.0	0.0	0.0	2.265
6	0.020	0.014	0.195	0.031	0.059	0.006	0.0	0.0	0.0	0.0	0.0	3.032
7	0.020	0.013	0.051	0.029	0.087	0.005	0.0	0.0	0.0	0.0	0.0	0.317
8	0.018	0.015	0.083	0.028	0.081	0.001	0.0	0.0	0.0	0.0	0.0	0.126
9	0.010	0.010	0.030	0.034	0.043	0.002	0.0	0.0	0.0	0.0	0.0	0.085
10	0.010	0.010	0.027	0.032	0.026	0.0	0.0	0.0	0.0	0.0	0.0	0.060
11	0.012	0.010	0.030	0.024	0.021	0.0	0.0	0.0	0.0	0.0	0.0	0.027
12	0.014	0.010	0.026	0.280	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.020
13	0.014	0.027	0.022	0.216	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.020
14	0.015	0.789	0.029	0.062	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.020
15	0.020	0.074	2.727	0.038	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.019
16	0.029	0.031	0.369	0.036	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.010
17	0.017	0.024	0.337	1.195	0.023	0.0	0.0	0.0	0.0	0.0	0.003	0.012
18	0.010	0.020	0.347	0.047	0.016	0.0	0.0	0.0	0.0	0.0	0.004	0.015
19	0.010	0.024	0.072	0.028	0.015	0.0	0.0	0.0	0.0	0.0	0.0	0.012
20	0.010	0.032	0.036	0.030	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.017
21	0.010	0.957	0.034	0.028	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.012
22	0.010	0.114	0.094	0.025	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.010
23	0.010	0.047	3.289	0.022	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.010
24	0.010	0.032	0.077	0.017	0.008	0.0	0.0	0.0	0.0	0.0	0.005	0.011
25	0.010	0.030	0.036	0.017	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.011
26	0.010	0.030	0.035	0.020	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.010
27	0.010	0.027	0.035	0.896	0.006	0.0	0.0	0.0	0.0	0.0	0.009	0.010
28	0.010	0.020	0.035	0.047	0.006	0.0	0.0	0.0	0.0	0.0	0.001	0.015
29	0.019		0.039	0.026	0.006	0.0	0.0	0.0	0.0	0.0	0.001	0.105
30	0.026		0.040	0.024	0.005	0.0	0.0	0.0	0.0	0.536	0.0	0.306
31	0.021		0.042		0.001		0.0	0.0		0.004		0.043
MEAN	0.0151	0.0867	0.2754	0.2249	0.0430	0.0017	0.0	0.0	0.0	0.0174	0.0098	0.2120
INCHES	0.064	0.332	1.168	0.923	0.182	0.007	0.0	0.0	0.0	0.074	0.003	0.899
STA AV	0.511	0.611	0.673	1.052	1.256	0.637	0.120	0.094	0.141	0.181	0.395	0.463

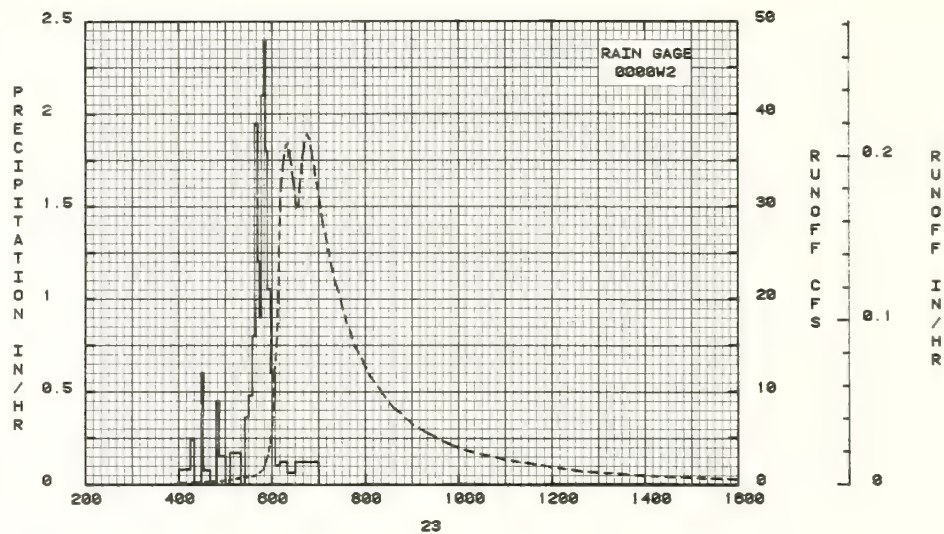
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.136791. Records began July 1937; part-year amounts not included in averages. STA AV based on 32 yr period.

1969 SELECTED RUNOFF EVENT RIESEL (WACO), TEXAS WATERSHED W-1												
ANTECEDENT CONDITIONS												
Date	Rainfall	Runoff	Date	Time	RAINFALL	Acc.	Date	Time	Runoff	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	Intensity (in/hr)	(inches)	Mo-Day	of Day	(cfs)		(inches)	
EVENT OF MARCH 23, 1969												
RG 0000W2												
3-23	0.0	0.005	3-23	400	0.0	0.0	3-23	359	0.190	0.0		
				415	0.0800	0.02		429	0.200	0.0006		
				420	0.2400	0.04		434	0.260	0.0007		
				429	0.0	0.04		449	0.290	0.0011		
				432	0.6000	0.07		454	0.340	0.0012		
WATERSHED CONDITIONS:												
49% tilled, but not planted;												
47% pasture, Bermudagrass,												
good cover, moderately												
grazed; 3% gravel roads; 1%												
Johnsongrass and weeds, not												
tilled or grazed. Straight												
row cultivation, not												
terraced.												
				520	0.1714	0.17		524	0.720	0.0026		
				525	0.0	0.17		529	0.780	0.0030		
				530	0.3600	0.20		534	0.830	0.0034		
				535	0.4800	0.24		539	0.920	0.0038		
				538	0.8000	0.28		544	1.220	0.0043		
				542	1.9500	0.41		547	1.440	0.0047		
				544	1.2900	0.45		549	1.640	0.0050		
				546	0.9000	0.48		551	2.110	0.0054		
				550	2.1000	0.62		552	2.340	0.0056		
				552	2.4000	0.70		553	2.630	0.0058		
				554	1.8000	0.76		554	2.860	0.0061		
				558	1.0500	0.83		555	3.130	0.0064		
				604	0.6000	0.89		556	3.510	0.0067		
				610	0.1000	0.90		557	4.070	0.0071		
				620	0.1200	0.92		558	4.470	0.0075		
				630	0.0600	0.93		559	5.140	0.0080		
				700	0.1200	0.99		600	5.740	0.0085		
								601	7.220	0.0091		
								602	9.550	0.0099		
								603	11.640	0.0109		
								604	12.660	0.0121		
								605	13.370	0.0133		
								606	15.070	0.0146		
								607	17.340	0.0161		
								608	20.820	0.0179		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.005700.

1969	SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED #1						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MARCH 23, 1969 (CONTINUED)										
							3-23	609	24.950	0.0201
								610	28.030	0.0226
								611	30.935	0.0254
								612	32.150	0.0284
								613	33.080	0.0315
								614	34.250	0.0347
								616	35.600	0.0414
								618	36.640	0.0482
								621	36.800	0.0587
								623	35.680	0.0656
								625	34.490	0.0722
								627	33.000	0.0786
								629	31.840	0.0847
								631	29.870	0.0906
								634	30.020	0.0991
								636	32.150	0.1050
								638	34.560	0.1114
								640	35.760	0.1181
								642	36.960	0.1250
								645	37.860	0.1357
								648	37.290	0.1464
								651	35.840	0.1568
								656	33.310	0.1732
								701	30.620	0.1884
								706	27.730	0.2022
								711	26.080	0.2150
								716	23.630	0.2268
								721	21.810	0.2376
								726	20.690	0.2477
								731	18.890	0.2571
								736	17.340	0.2657
								741	16.430	0.2737
								746	14.840	0.2811
								751	14.160	0.2880
								756	13.430	0.2945
								801	12.490	0.3037
								806	11.640	0.3064
								811	11.060	0.3118
								816	10.500	0.3169
								826	9.310	0.3263
								836	8.220	0.3346
								846	7.620	0.3421
								901	6.360	0.3521
								916	5.660	0.3607
								931	4.950	0.3683
								945	4.390	0.3745
								959	3.890	0.3800
								1019	3.400	0.3869
								1039	3.000	0.3930
								1055	2.610	0.3983
								1129	2.210	0.4052
								1159	1.810	0.4109
								1229	1.430	0.4155
								1259	1.210	0.4193
								1329	1.060	0.4225
								1359	0.860	0.4252
								1429	0.800	0.4276
								1459	0.680	0.4297
								1529	0.580	0.4315
								1559	0.480	0.4330
								1629	0.430	0.4343
								1659	0.390	0.4355
								1759	0.320	0.4375
								1859	0.270	0.4392
								1959	0.230	0.4406
								2059	0.200	0.4418
								2159	0.180	0.4429
								2259	0.160	0.4439
								2400	0.150	0.4448

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.005700.



EVENT OF MARCH 23, 1969
BIESEL (WACO), TEXAS WATERSHED W-1

RIESEL (WACO), TEXAS WATERSHED W-2

LOCATION: Falls Co., Texas; 19 mi. SE of Waco; Brazos River Basin.

AREA: 130.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS		WATERSHED W-2	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	1.10	2.57	3.84	4.53	1.39	0.34	0.03	2.82	1.52	6.35	1.92	3.57	29.98			
	Q	0.144	0.723	1.720	1.745	0.536	0.075	0.0	0.0	0.0	0.122	0.132	1.229	6.427			
STA AV	P	2.25	2.71	2.48	4.05	4.28	3.33	1.50	2.18	2.50	2.60	2.98	2.55	33.41			
	Q	0.596	0.734	0.777	1.093	1.276	0.598	0.121	0.060	0.115	0.164	0.403	0.573	6.511			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		8 Days			
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.		
1969		3-23	0.352	3-23	0.264	3-23	0.366	4-12	0.571	4-12	0.681	12- 5	0.786	12- 5	0.865	4-11	1.085
MAXIMUMS FOR PERIOD OF RECORD																	
		5- 1	4.830	5- 1	2.860	5- 1	5.400	5- 1	6.910	5- 1	6.970	5- 1	7.120	4-30	9.260	4-29	10.960
		1944		1944		1944		1944		1944		1944		1944		1944	

NOTES: Watershed conditions: 56% pasture; 17% row grain sorghum; 21% fall planted small grain, largely oats; 5% gravel and paved roads; 1% other. Approximately 90% of other is Johnsongrass and weeds in conservation reserve, but neither tilled nor grazed. Cropland farmed on contour, not terraced. Modified conservation applied 1956. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 42.7-5 (Revised). Precipitation and runoff records began July 1937; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages W-2, W-4, W-5A, and W-6. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED W-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.03	0.03E	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.18	0.0	0.51	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.16	0.0		
3	0.0	0.0	0.0	0.0	0.01E	0.34	0.0	0.0	0.10E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.79	0.02E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0		
5	0.0	0.03E	0.37	0.04E	0.84	0.0	0.0	0.06E	0.0	0.05E	0.0	2.15		
6	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.63		
7	0.0	0.15E	0.18	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.68	0.0	0.0	0.0	0.0	0.0	1.36	0.0	0.0		
13	0.0	0.35	0.0	0.0	0.00E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.09	0.22	0.0	0.0	0.0	0.0	0.12E	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.09	0.0	0.02E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0		
16	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.72	0.0	0.03	0.0		
17	0.0	0.0	0.18	0.76	0.07E	0.0	0.0	0.0	0.0	0.0	0.53	0.0		
18	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.0		
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.13E	0.0	0.02E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.38	0.0	0.0	0.0	0.0		
23	0.0	0.0	0.98	0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15E	0.0	0.0	0.04	0.0		
27	0.0	0.0	0.0	1.16	0.0	0.0	0.0	0.38	0.0	1.31	0.19	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.27	0.0	0.99	0.0	0.10E		
29	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.0	0.31	0.0	0.69		
30	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	2.32	0.0	0.0 S		
31	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.10	2.57	3.84	4.53	1.39	0.34	0.03	2.82	1.52	6.35	1.92	3.57		
STA AV	2.25	2.71	2.48	4.05	4.28	3.33	1.50	2.18	2.50	2.60	2.98	2.55		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages W-2, W-4, W-5A, and W-6. Records began July 1937. STA AV based on 32 yr period.

1969 MEAN DAILY DISCHARGE (cfs)												RIESEL (WACO), TEXAS WATERSHED #2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.043	0.028	0.055	0.084	0.096	0.034	0.0	0.0	0.0	0.0	0.010	0.032	
2	0.047	0.016	0.265	0.078	0.089	0.031	0.0	0.0	0.0	0.0	0.006	0.032	
3	0.047	0.010	0.114	0.079	0.084	0.047	0.0	0.0	0.0	0.0	0.010	0.032	
4	0.046	0.010	0.064	0.937	0.090	0.042	0.0	0.0	0.0	0.0	0.010	0.032	
5	0.038	0.017	0.377	0.123	1.003	0.031	0.0	0.0	0.0	0.0	0.010	2.528	
6	0.034	0.015	0.156	0.081	0.106	0.025	0.0	0.0	0.0	0.0	0.012	2.159	
7	0.028	0.017	0.078	0.081	0.129	0.021	0.0	0.0	0.0	0.0	0.014	0.105	
8	0.025	0.020	0.106	0.089	0.123	0.021	0.0	0.0	0.0	0.0	0.015	0.057	
9	0.016	0.019	0.064	0.087	0.080	0.021	0.0	0.0	0.0	0.0	0.010	0.057	
10	0.019	0.016	0.066	0.079	0.072	0.020	0.0	0.0	0.0	0.0	0.018	0.055	
11	0.020	0.015	0.069	0.079	0.071	0.017	0.0	0.0	0.0	0.0	0.020	0.052	
12	0.020	0.010	0.065	3.864	0.069	0.013	0.0	0.0	0.0	0.0	0.017	0.051	
13	0.020	0.033	0.063	0.205	0.071	0.014	0.0	0.0	0.0	0.0	0.017	0.054	
14	0.020	1.537	0.069	0.104	0.075	0.012	0.0	0.0	0.0	0.0	0.010	0.059	
15	0.021	0.075	2.812	0.095	0.071	0.013	0.0	0.0	0.0	0.0	0.012	0.060	
16	0.039	0.040	0.306	0.099	0.068	0.012	0.0	0.0	0.0	0.0	0.019	0.060	
17	0.022	0.038	0.256	1.428	0.066	0.012	0.0	0.0	0.0	0.0	0.062	0.058	
18	0.020	0.037	0.287	0.089	0.058	0.009	0.0	0.0	0.0	0.0	0.062	0.060	
19	0.020	0.046	0.102	0.091	0.053	0.007	0.0	0.0	0.0	0.0	0.022	0.060	
20	0.020	0.060	0.086	0.095	0.046	0.004	0.0	0.0	0.0	0.0	0.019	0.060	
21	0.020	1.411	0.088	0.093	0.043	0.003	0.0	0.0	0.0	0.0	0.024	0.060	
22	0.016	0.121	0.152	0.082	0.042	0.0	0.0	0.0	0.0	0.0	0.024	0.056	
23	0.016	0.066	2.918	0.081	0.042	0.0	0.0	0.0	0.0	0.0	0.026	0.054	
24	0.010	0.059	0.104	0.072	0.036	0.0	0.0	0.0	0.0	0.0	0.054	0.059	
25	0.012	0.060	0.086	0.071	0.036	0.0	0.0	0.0	0.0	0.0	0.037	0.054	
26	0.016	0.060	0.091	0.076	0.037	0.0	0.0	0.0	0.0	0.0	0.033	0.052	
27	0.020	0.058	0.095	0.932	0.036	0.0	0.0	0.0	0.0	0.0	0.048	0.059	
28	0.019	0.053	0.093	0.088	0.032	0.0	0.0	0.0	0.0	0.0	0.035	0.066	
29	0.026		0.102	0.085	0.037	0.0	0.0	0.0	0.0	0.0	0.032	0.167	
30	0.038		0.100	0.085	0.037	0.0	0.0	0.0	0.0	0.653	0.030	0.349	
31	0.031		0.104		0.031		0.0	0.0		0.014		0.075	
MEAN	0.0255	0.1410	0.3030	0.3177	0.0945	0.0137	0.0	0.0	0.0	0.0215	0.0240	0.2166	
INCHES	0.144	0.723	1.720	1.745	0.536	0.075	0.0	0.0	0.0	0.122	0.132	1.229	
STA AV	0.596	0.734	0.777	1.093	1.276	0.598	0.121	0.060	0.115	0.164	0.403	0.573	

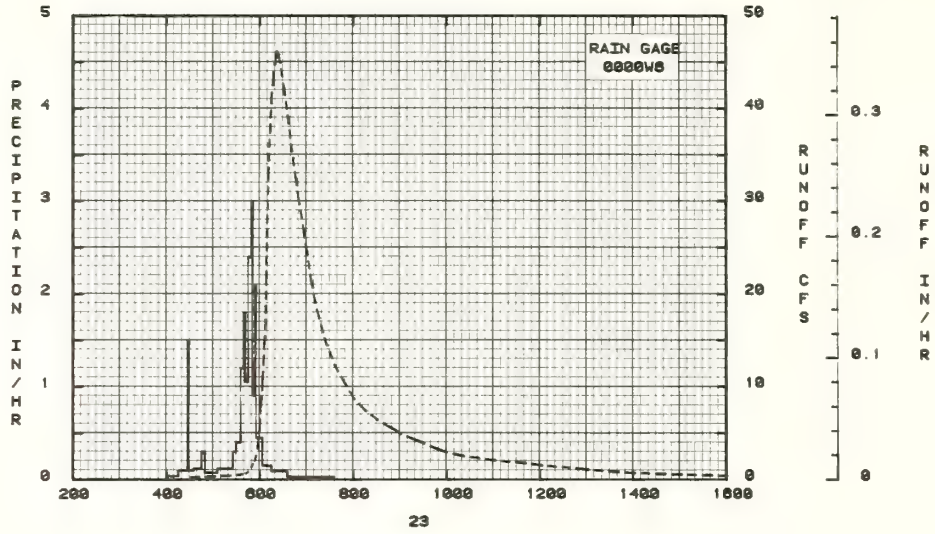
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.163088. Records began July 1937. STA AV based on 32 yr period.

1969			SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED #2					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969											
RG 0000W6			RG 0000W6								
3-23	0.0	0.010	3-23	400	0.0	0.0	3-23	432	0.250	0.0	
				415	0.0400	0.01		442	0.270	0.0003	
				427	0.1000	0.03		452	0.310	0.0007	
				429	1.5000	0.08		502	0.360	0.0011	
				435	0.1000	0.09		512	0.400	0.0016	
WATERSHED CONDITIONS:				445	0.1200	0.11		522	0.450	0.0021	
21% fall planted oats, not				449	0.3000	0.13		532	0.510	0.0027	
yet planted; 17% row grain				505	0.0750	0.15		537	0.570	0.0030	
sorghum, not yet planted;				515	0.1200	0.17		542	0.690	0.0034	
56% pasture, Bermudagrass,				525	0.1200	0.19		545	0.820	0.0037	
good cover, moderately grazed;											
5% gravel roads; 1% Johnson-				529	0.3000	0.21		549	1.340	0.0042	
grass, not tilled or grazed.				535	0.4000	0.25		551	1.680	0.0046	
Cropland farmed on contour, no				539	1.2000	0.33		553	2.060	0.0051	
terraced.				541	1.8000	0.39		555	2.610	0.0057	
				545	1.0500	0.46		557	3.470	0.0065	
				549	2.4000	0.62		558	4.280	0.0070	
				551	3.0000	0.72		559	5.300	0.0076	
				553	0.9000	0.75		600	6.490	0.0084	
				555	2.1000	0.82		601	7.810	0.0093	
				603	0.4500	0.88		602	8.920	0.0104	
				615	0.1500	0.91		603	10.200	0.0116	
				635	0.0900	0.94		604	11.590	0.0130	
				735	0.0300	0.97		605	13.370	0.0146	
								606	14.730	0.0164	
								607	17.220	0.0184	
								608	21.680	0.0209	
								609	26.220	0.0239	
								610	30.020	0.0275	
								611	33.620	0.0315	
								613	37.530	0.0406	
								615	41.010	0.0506	
								617	43.220	0.0613	
								619	44.770	0.0725	
								622	46.170	0.0898	
								624	45.820	0.1015	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.007629.

1969	SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED W-2						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)										
							3-23	626	44.940	0.1130
								631	42.190	0.1407
								636	39.090	0.1665
								641	35.360	0.1901
								646	32.460	0.2117
								651	29.650	0.2314
								656	26.790	0.2493
								701	24.250	0.2656
								706	21.416	0.2801
								711	19.020	0.2929
								716	17.340	0.3045
								726	14.440	0.3247
								736	12.330	0.3417
								746	10.760	0.3564
								801	8.640	0.3749
								816	7.360	0.3902
								831	6.400	0.4033
								846	5.660	0.4148
								901	4.910	0.4249
								916	4.350	0.4337
								931	3.850	0.4415
								945	3.340	0.4479
								1000	2.870	0.4538
								1012	2.680	0.4580
								1022	2.480	0.4613
								1042	2.260	0.4673
								1102	2.020	0.4727
								1132	1.810	0.4800
								1202	1.490	0.4863
								1302	1.050	0.4960
								1332	0.820	0.4996
								1402	0.690	0.5025
								1432	0.590	0.5049
								1502	0.510	0.5070
								1532	0.450	0.5088
								1602	0.380	0.5104
								1632	0.340	0.5118
								1702	0.310	0.5130
								1732	0.270	0.5141
								1800	0.250	0.5150
								1830	0.220	0.5159
								1930	0.200	0.5175
								2130	0.180	0.5204
							3-24	2400	0.160	0.5236
								530	0.130	0.5297
								830	0.120	0.5326
								1130	0.100	0.5351
								1330	0.100	0.5366
								1530	0.080	0.5380
								1730	0.070	0.5391
								1830	0.060	0.5396
								1930	0.060	0.5401
								2130	0.070	0.5411
								2400	0.090	0.5426

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.007629.



EVENT OF MARCH 23 - 24, 1969
RIESEL (WACO), TEXAS WATERSHED W-2

RIESEL (WACO), TEXAS WATERSHED W-6

LOCATION: Falls Co., Texas; 19 mi. SE of Waco; Brazos River Basin.

AREA: 42.30 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													RIESEL (WACO), TEXAS WATERSHED W-6	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969 P	1.06	2.60	3.85	4.34	1.38	0.33	0.02	2.71	1.58	6.25	1.88	3.58	29.57	
Q	0.0	0.194	0.532	0.711	0.109	0.0	0.0	0.0	0.0	0.097	0.0	0.526	2.169	
STA AV P	2.10	2.64	2.36	4.10	4.00	3.48	1.43	2.25	2.62	2.77	3.01	2.39	33.13	
Q	0.337	0.401	0.464	0.760	0.837	0.494	0.073	0.028	0.092	0.114	0.299	0.334	4.234	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		12 Hours		1 Day		2 Days	
	Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	3-23	0.126	3-23	0.107	3-23	0.158	12- 6	0.251	12- 6	0.278	12- 5	0.465	12- 5	0.503
														0.504
MAXIMUMS FOR PERIOD OF RECORD														
	6-10	3.990	4-19	2.330	4-19	2.780	5-11	3.130	5-11	3.210	3-29	4.060	11-22	5.090
	1941		1957		1957		1957		1957		1965		1940	1957

NOTES: Watershed conditions: 24% row grain sorghum; 51% fall planted small grain, largely oats; 18% pasture; 7% gravel and paved roads. Cropland farmed on contour, not terraces. Modified conservation program since 1956. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 42.7-5 (Revised). Precipitation and runoff records began May 1939; station not in operation July 1943 to Jan. 1, 1946; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages W-2, W-4, and W-5A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED W-6	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.03	0.03E	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.18	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.16	0.0		
3	0.0	0.0	0.0	0.0	0.01E	0.33	0.0	0.0	0.09E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.67	0.01E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0		
5	0.0	0.03E	0.36	0.04E	0.84	0.0	0.0	0.06E	0.0	0.05E	0.0	2.17		
6	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.59		
7	0.0	0.14E	0.17	0.0	0.09E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.62	0.0	0.0	0.0	0.0	0.0	1.32	0.0	0.0		
13	0.0	0.35	0.0	0.0	0.00E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.11	0.22	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.09	0.0	0.04E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0		
16	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.0	0.02	0.0		
17	0.0	0.0	0.20	0.74	0.07E	0.0	0.0	0.0	0.0	0.0	0.47	0.0		
18	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.0		
19	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.13E	0.0	0.02E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.34	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14E	0.0	0.0	0.02	0.0		
27	0.0	0.0	0.0	1.17	0.0	0.0	0.0	0.38	0.0	1.31	0.19	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.18	0.0	1.00	0.0	0.09E		
29	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.31	0.0	0.73		
30	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.0	2.26	0.0	0.0 S		
31	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.06	2.60	3.85	4.34	1.38	0.33	0.02	2.71	1.58	6.25	1.88	3.58		
STA AV	2.10	2.64	2.36	4.10	4.00	3.48	1.43	2.25	2.62	2.77	3.01	2.39		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages W-2, W-4, and W-5A. Records began May 1939; station not in operation July 1943 to Jan. 1, 1946; part-year amounts not included in averages. STA AV based on 27 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED W-6												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.020	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.004	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.101	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.027	0.024	0.120	0.0	0.0	0.0	0.0	0.0	0.0	0.335
6	0.0	0.0	0.007	0.025	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.550
7	0.0	0.0	0.001	0.030	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.011
8	0.0	0.0	0.001	0.030	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.025	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.020	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.458	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.185	0.002	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.001	0.327	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.018	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.021	0.158	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.023	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.008	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.005	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.156	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.002	0.023	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.378	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.006	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.005	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.010	0.178	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.010	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.010	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.009
30	0.0	0.0	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.173	0.0	0.029
31	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0123	0.0305	0.0421	0.0063	0.0	0.0	0.0	0.0	0.0056	0.0	0.0301
INCHES	0.0	0.194	0.532	0.711	0.109	0.0	0.0	0.0	0.0	0.097	0.0	0.526
STA AV	0.337	0.401	0.464	0.760	0.837	0.494	0.073	0.028	0.092	0.114	0.293	0.334

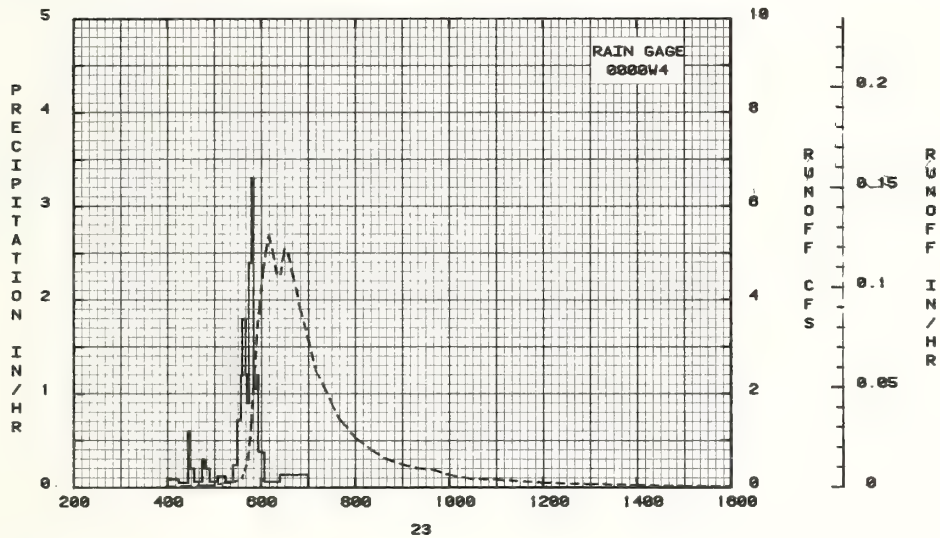
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.562683. Records began May 1939; station not in operation July 1943 to Jan. 1, 1946; part-year amounts not included in averages. STA AV based on 27 yr period.

1969 SELECTED RUNOFF EVENT RIESEL (WACO), TEXAS WATERSHED W-6									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)
EVENT OF MARCH 23, 1969									
RG 0000W4			RG 0000W4						
3-23	0.0	0.003	3-23	400	0.0	0.0	3-23	400	0.020
				414	0.0857	0.02		430	0.030
				426	0.0500	0.03		445	0.040
				428	0.6000	0.05		500	0.050
				434	0.2000	0.07		505	0.070
WATERSHED CONDITIONS:				444	0.0600	0.08		510	0.080
51% fall planted oats, 8 inches				448	0.3000	0.10		515	0.100
high; 24% seed bed prepared for				454	0.2000	0.12		520	0.110
row grain sorghum; 18% pasture				504	0.0600	0.13		525	0.120
Bermudagrass, good cover,				514	0.1200	0.15		530	0.150
moderately grazed; 7% gravel				524	0.0600	0.16		535	0.200
roads. Cropland farmed on				529	0.2400	0.18		537	0.270
contour, not terraced.				534	0.7200	0.24		539	0.360
				536	1.2000	0.28		541	0.470
				538	1.8000	0.34		543	0.590
				540	1.8000	0.40		544	0.750
				542	1.2000	0.44		545	0.900
				544	0.9000	0.47		546	1.080
				548	2.4000	0.63		547	1.300
				550	3.2999	0.74		548	1.550
				554	1.0500	0.81		549	1.850
				556	1.2000	0.85		550	2.140
				604	0.3750	0.90		552	2.600
				624	0.0600	0.92		554	3.100
				700	0.1333	1.00		556	3.560
								558	3.840
								600	4.170
								602	4.600
								604	4.780
								606	5.020
								608	5.170
								610	5.370
								615	5.020
								620	4.550
								625	4.550

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.023445.

1969	SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED W-6						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23, 1969 (CONTINUED)										
				3-23				630	5.090	0.0763
								635	4.950	0.0861
								640	4.550	0.0954
								645	4.220	0.1040
								650	3.800	0.1118
								700	3.150	0.1254
								710	2.470	0.1364
								720	2.150	0.1454
								730	1.790	0.1531
								740	1.440	0.1594
								750	1.270	0.1647
								800	1.050	0.1692
								810	0.930	0.1731
								820	0.800	0.1765
								830	0.700	0.1794
								840	0.600	0.1819
								900	0.480	0.1861
								920	0.400	0.1895
								940	0.370	0.1925
								1000	0.260	0.1950
								1030	0.170	0.1975
								1100	0.160	0.1994
								1200	0.090	0.2023
								1300	0.060	0.2041
								1400	0.040	0.2053
								1500	0.020	0.2060
								1800	0.020	0.2074
								2400	0.010	0.2095

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.023445.



EVENT OF MARCH 23, 1969
RIESEL (WACO), TEXAS WATERSHED W-6

RIESEL (WACO), TEXAS WATERSHED W-10

LOCATION: Falls Co., Texas; 19 mi. SE of Waco; Brazos River Basin.

AREA: 19.70 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED W-10													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	1.16	2.52	3.85	4.78	1.40	0.35	0.03	2.95	1.46	6.39	1.96	3.53	30.38													
	Q	0.0	0.849	1.547	1.792	0.245	0.0	0.0	0.0	0.0	0.311	0.0	1.486	6.230													
STA AV	P	2.13	2.66	2.25	4.06	3.90	3.44	1.38	2.34	2.55	2.80	2.97	2.37	32.86													
	Q	0.482	0.494	0.494	0.975	0.937	0.609	0.089	0.092	0.195	0.262	0.470	0.465	5.565													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		3-23	0.422	3-23	0.340	4-12	0.542	4-12	0.831	4-12	0.959	12- 5	1.367	12- 5	1.412	11-25	1.412										
MAXIMUMS FOR PERIOD OF RECORD																											
		6-10	5.010	4-19	2.310	4-19	2.550	5-11	3.000	11-22	3.330	11-22	3.530	4-24	5.160	5-15	8.290										
		1941		1957		1957		1957		1940		1940		1966		1957											

NOTES: Watershed conditions: 100% Coastal Bermudagrass for pasture. Good cover, moderately grazed, terraced. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 42.7-5 (Revised). Precipitation and runoff records began Aug. 1938; station not in operation July 1943 to May 3, 1946; part-year amounts not included in averages. Precipitation data obtained from rain gage W-6. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)														RIESEL (WACO), TEXAS WATERSHED W-10									
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec											
1	0.03	0.03E	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
2	0.19	0.0	0.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0										
3	0.0	0.0	0.0	0.0	0.01E	0.35	0.0	0.0	0.11	0.0	0.0	0.0	0.0										
4	0.0	0.0	0.0	0.99	0.01E	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0										
5	0.0	0.04E	0.39	0.02E	0.86	0.0	0.0	0.06E	0.0	0.05E	0.0	2.13	0.0										
6	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0										
7	0.0	0.15	0.18	0.0	0.12E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
8	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
9	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0										
12	0.0	0.0	0.0	1.74	0.0	0.0	0.0	0.0	0.0	1.41	0.0	0.0	0.0										
13	0.0	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
14	0.0	1.08	0.21	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0										
15	0.0	0.0	1.09	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
16	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.66	0.0	0.02	0.0	0.0										
17	0.0	0.0	0.16	0.78	0.07E	0.0	0.0	0.0	0.0	0.0	0.62	0.0	0.0										
18	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.0										
19	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
20	0.0	0.15	0.0	0.02E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0	0.0										
21	0.0	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
22	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.40	0.0	0.0	0.0	0.0	0.0										
23	0.0	0.0	0.97	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0	0.0										
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0										
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.04	0.0	0.0										
27	0.0	0.0	0.0	1.15	0.0	0.0	0.0	0.38	0.0	1.28	0.19	0.0	0.0										
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.98	0.0	0.08E	0.0										
29	0.10E		0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.29	0.0	0.65	0.0										
30	0.34		0.0	0.0	0.0	0.0	0.0	0.01E	0.0	2.38	0.0	0.0	0.0										
31	0.22		0.0		0.0		0.0	0.0		0.0			0.0										
TOTAL	1.16	2.52	3.85	4.78	1.40	0.35	0.03	2.95	1.46	6.39	1.96	3.53											
STA AV	2.13	2.66	2.25	4.06	3.90	3.44	1.38	2.34	2.55	2.80	2.97	2.37											

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage W-6. Records began Aug. 1938; station not in operation July 1943 to May 3, 1946; part-year amounts not included in averages. STA AV based on 27 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED W-10												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.028	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.275	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.056	0.005	0.203	0.0	0.0	0.0	0.0	0.0	0.0	0.773
6	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.395
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.807	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.001	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.417	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.004	0.568	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.034	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.013	0.246	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.275	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.006	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.539	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.144	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.009
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.258	0.0	0.052
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0251	0.0413	0.0494	0.0065	0.0	0.0	0.0	0.0	0.0083	0.0	0.0397
INCHES	0.0	0.889	1.547	1.792	0.245	0.0	0.0	0.0	0.0	0.311	0.0	1.486
STA AV	0.482	0.494	0.494	0.975	0.937	0.609	0.089	0.092	0.195	0.262	0.470	0.465

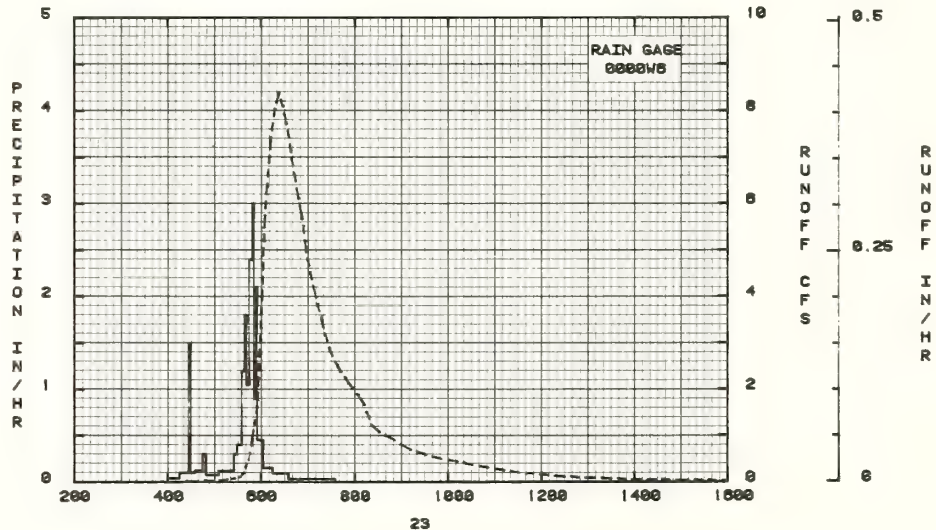
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 1.208198. Records began Aug. 1938; station not in operation July 1943 to May 3, 1946; part-year amounts not included in averages. STA AV based on 27 yr period.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED W-10							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23 - 24, 1969										
RG 0000W6			RG 0000W6							
3-23	0.0	0.000	3-23	400	0.0	0.0	3-23	200	0.0	0.0
				415	0.0400	0.01		300	0.0	0.0
				427	0.1000	0.03		400	0.0	0.0
				429	1.5000	0.08		415	0.010	0.0001
				435	0.1000	0.09		430	0.020	0.0003
WATERSHED CONDITIONS: 100% Coastal Bermudagrass pasture, 4 to 6 inches high, good cover.				445	0.1200	0.11		500	0.030	0.0009
				449	0.3000	0.13		507	0.030	0.0011
				505	0.0750	0.15		517	0.060	0.0015
				515	0.1200	0.17		522	0.070	0.0018
				525	0.1200	0.19		527	0.080	0.0021
				529	0.3000	0.21		532	0.100	0.0025
				535	0.4000	0.25		534	0.120	0.0027
				539	1.2000	0.33		536	0.160	0.0029
				541	1.8000	0.39		538	0.200	0.0032
				545	1.0500	0.46		540	0.310	0.0036
549	2.4000	0.62		542	0.390	0.0042				
551	3.0000	0.72		544	0.470	0.0049				
553	0.9000	0.75		546	0.630	0.0058				
555	2.1000	0.82		548	0.830	0.0070				
603	0.4500	0.88		550	1.110	0.0086				
615	0.1500	0.91		552	1.310	0.0106				
635	0.0900	0.94		553	1.330	0.0117				
735	0.0300	0.97		555	1.630	0.0142				
				557	2.260	0.0175				
				559	3.010	0.0219				
					601	3.980	0.0278			
					603	4.890	0.0352			
					605	5.750	0.0442			
					608	6.430	0.0595			
					613	7.430	0.0885			
					618	8.040	0.1209			
					623	8.380	0.1554			
					628	8.090	0.1899			
					633	7.710	0.2230			
					638	7.110	0.2541			

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.050342.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED W-10						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)									
							3-23	643	6.620
								648	6.100
								653	5.660
								658	4.950
								708	4.120
								718	3.470
								728	2.850
								738	2.490
								748	2.240
								758	2.010
								808	1.780
								813	1.650
								822	1.220
								832	1.070
								852	0.890
								912	0.690
								932	0.580
								952	0.490
								1012	0.430
								1032	0.360
								1052	0.300
								1112	0.240
								1132	0.190
								1200	0.150
								1230	0.100
								1300	0.080
								1330	0.060
								1400	0.040
								1500	0.030
								1600	0.020
								1700	0.010
								1800	0.010
								2100	0.0
								2400	0.0
							3-24	600	0.0
								1200	0.0

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.050342.



EVENT OF MARCH 23 - 24, 1969
RIESEL (WACO), TEXAS WATERSHED W-10

RIESEL (WACO), TEXAS WATERSHED Y

LOCATION: Falls Co., Texas; 17 mi. SE Waco; Brazos Basin.

AREA: 309.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)										RIESEL (WACO), TEXAS		WATERSHED Y			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	1.03	2.56	4.22	4.32	1.53	0.34	0.06	2.38	1.60	6.33	1.93	3.67	29.98	
	Q	0.031	0.444	1.567	0.982	0.186	0.0	0.0	0.0	0.0	0.047	0.005	0.799	4.061	
STA AV	P	2.22	2.63	2.29	3.97	3.93	3.58	1.48	2.07	2.47	2.64	2.84	2.37	32.48	
	Q	0.510	0.533	0.505	0.798	0.760	0.580	0.123	0.046	0.102	0.094	0.319	0.330	4.701	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-23	0.284	3-23	0.225	3-23	0.338	3-23	0.476	3-23	0.511	3-15	0.654	3-15	0.718
MAXIMUMS FOR PERIOD OF RECORD															
		4-19	2.540	4-19	2.150	4-19	2.740	4-19	3.480	4-19	3.660	3-29	3.980	11-22	4.770
		1957		1957		1957		1957		1957		1965		1940	1957

NOTES: Watershed conditions: 50% pasture; 13% cotton; 16% fall planted small grain, largely oats; 20% row grain sorghum; 1% gravel and paved roads. Cropland terraced, contour cultivation. No change in conservation practices. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 42.11-5 (Revised). Precipitation and runoff records began May 1937; station not in operation July 1943 to May 1, 1946; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages 69, 69B, 70, 75A, 84A, 89, and W-2A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED Y	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.03	0.03E	0.0	0.0	0.14E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.18	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.09E	0.0	0.17	0.0		
3	0.0	0.0	0.0	0.0	0.05E	0.34	0.0	0.0	0.06E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.47	0.04E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.37	0.06E	0.86	0.0	0.0	0.07E	0.0	0.07E	0.0	2.30		
6	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.59		
7	0.0	0.07E	0.18	0.0	0.12E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	0.0	1.31	0.0	0.0		
13	0.0	0.38	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.15	0.28	0.0	0.0E	0.0	0.0	0.09E	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.40	0.0	0.01E	0.0	0.0	0.0	0.0E	0.0	0.0	0.0		
16	0.17	0.0	0.0	0.0	0.0	0.0	0.0E	0.0	0.46	0.0	0.04	0.0		
17	0.0	0.0	0.15	0.70	0.08E	0.0	0.0	0.0	0.0	0.0	0.36	0.0		
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.0		
19	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.14E	0.0	0.04E	0.0	0.0	0.06E	0.0	0.29E	0.0	0.0	0.0		
21	0.0	0.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.21	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.04	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.06	0.0		
27	0.0	0.0	0.0	1.19	0.0	0.0	0.00E	0.24	0.0	1.42	0.14	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0E	0.26E	0.0	1.06	0.0	0.10E		
29	0.13E		0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.36	0.0	0.69		
30	0.31		0.0	0.0	0.0	0.0	0.0	0.10E	0.0	2.12	0.0	0.0S		
31	0.21		0.0		0.0		0.0	0.0		0.0		0.0		
TOTAL	1.03	2.56	4.22	4.32	1.53	0.34	0.06	2.38	1.60	6.33	1.93	3.67		
STA AV	2.22	2.63	2.29	3.97	3.93	3.58	1.48	2.07	2.47	2.64	2.84	2.37		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 69, 69B, 70, 75A, 84A, 89, and W-2A. Records began May 1937; station not in operation July 1943 to May 1, 1946; part-year amounts not included in averages. STA AV based on 28 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED Y												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.010	0.034	0.023	0.049	0.026	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.027	0.021	0.327	0.042	0.038	0.0	0.0	0.0	0.0	0.0	0.002	0.0
3	0.022	0.010	0.126	0.041	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.010	0.010	0.056	0.300	0.044	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.010	0.010	0.507	0.124	1.615	0.0	0.0	0.0	0.0	0.0	0.0	4.010
6	0.010	0.015	0.220	0.040	0.105	0.0	0.0	0.0	0.0	0.0	0.0	5.123
7	0.010	0.011	0.073	0.035	0.183	0.0	0.0	0.0	0.0	0.0	0.0	0.254
8	0.011	0.010	0.162	0.030	0.168	0.0	0.0	0.0	0.0	0.0	0.0	0.062
9	0.003	0.010	0.037	0.035	0.063	0.0	0.0	0.0	0.0	0.0	0.0	0.046
10	0.0	0.010	0.030	0.028	0.023	0.0	0.0	0.0	0.0	0.0	0.0	0.036
11	0.009	0.010	0.030	0.015	0.013	0.0	0.0	0.0	0.0	0.0	0.0	0.026
12	0.010	0.010	0.033	6.763	0.013	0.0	0.0	0.0	0.0	0.0	0.0	0.025
13	0.010	0.042	0.026	0.555	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.022
14	0.010	2.443	0.033	0.134	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.021
15	0.010	0.150	8.444	0.067	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.021
16	0.026	0.038	0.888	0.057	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.020
17	0.017	0.024	0.639	2.380	0.015	0.0	0.0	0.0	0.0	0.0	0.0	0.020
18	0.010	0.020	0.692	0.074	0.010	0.0	0.0	0.0	0.0	0.0	0.023	0.020
19	0.010	0.032	0.157	0.037	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.020
20	0.010	0.066	0.071	0.048	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.020
21	0.010	2.221	0.065	0.045	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.017
22	0.010	0.267	0.188	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.016
23	0.010	0.086	6.869	0.023	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010
24	0.0 T	0.056	0.194	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.012	0.012
25	0.001	0.046	0.077	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.011
26	0.010	0.043	0.073	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.010
27	0.010	0.042	0.069	1.636	0.0	0.0	0.0	0.0	0.0	0.0	0.016	0.016
28	0.010	0.027	0.058	0.082	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.026
29	0.020		0.055	0.027	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.121
30	0.053		0.060	0.022	0.0	0.0	0.0	0.0	0.0	0.604	0.0	0.351
31	0.034		0.062		0.0		0.0	0.0		0.007		0.043
MEAN	0.0130	0.2058	0.6561	0.4251	0.0777	0.0	0.0	0.0	0.0	0.0197	0.0022	0.3348
INCHES	0.031	0.444	1.567	0.982	0.186	0.0	0.0	0.0	0.0	0.047	0.005	0.799
STA AV	0.510	0.533	0.505	0.798	0.760	0.580	0.123	0.046	0.102	0.094	0.319	0.330

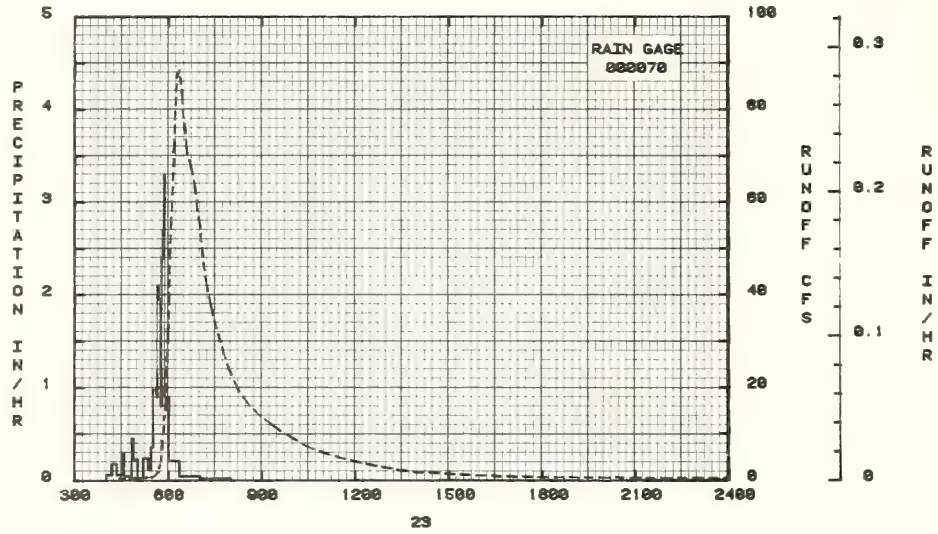
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.077028. Records began May 1937; station not in operation July 1943 to May 1, 1946; part-year amounts not included in averages. STA AV based on 28 yr period.

1969	SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS			WATERSHED Y			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23 - 24, 1969										
RG 000070			RG 000070							
3-23	0.0	0.006	3-23	401	0.0	0.0	3-23	426	0.350	0.0
				411	0.0600	0.01		436	0.400	0.0002
				421	0.1800	0.04		446	0.410	0.0004
				431	0.0600	0.05		451	0.440	0.0005
				435	0.3000	0.07		456	0.490	0.0006
WATERSHED CONDITIONS:				449	0.0429	0.08		501	0.520	0.0007
50% pasture, Bermudagrass				453	0.4500	0.11		506	0.530	0.0008
and native grass, good				501	0.2250	0.14		511	0.560	0.0009
cover, moderately grazed;				511	0.0	0.14		516	0.620	0.0011
13% seed bed prepared for				521	0.2400	0.18		521	0.670	0.0013
cotton; 20% seed bed pre-				526	0.1200	0.19		526	0.730	0.0015
pared for row grain sor-				531	0.3600	0.22		531	0.850	0.0017
ghum; 16% fall planted oats,				537	1.0000	0.32		534	1.100	0.0019
8 inches high; 1% gravel roads.				539	0.9000	0.35		536	1.260	0.0020
Cropland terraced, cultivated				541	2.1000	0.42		538	1.480	0.0021
on contour.				545	1.9500	0.55		540	1.800	0.0023
				548	0.8000	0.59		542	2.680	0.0025
				549	2.3999	0.63		544	3.400	0.0028
				551	2.7000	0.72		546	4.300	0.0032
				553	3.2999	0.83		547	5.320	0.0035
				557	0.9000	0.89		548	6.590	0.0038
				601	0.9000	0.95		549	8.520	0.0042
				621	0.2100	1.02		550	10.300	0.0047
				701	0.0450	1.05		551	11.580	0.0053
				801	0.0200	1.07		552	13.710	0.0060
								553	13.750	0.0067
								554	15.490	0.0075
								555	17.790	0.0084
								556	19.300	0.0094
								557	22.820	0.0105
								558	26.720	0.0118
								559	31.160	0.0133
								600	33.570	0.0150
								601	38.800	0.0169
								603	49.760	0.0216

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.003210.

1969 SELECTED RUNOFF EVENT			BIESEL (WACO), TEXAS			WATERSHED Y		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)								
				3-23			605	55.220
							607	60.210
							609	66.240
							611	73.470
							616	87.000
							621	88.470
							626	82.820
							631	76.360
							636	70.410
							641	68.920
							646	66.000
							651	63.290
							656	58.110
							701	54.490
							706	48.310
							711	43.630
							716	40.870
							721	38.160
							726	35.740
							736	31.370
							746	27.720
							756	24.110
							816	19.160
							836	16.160
							856	13.900
							916	12.220
							936	10.610
							956	9.350
							1026	7.260
							1056	6.030
							1126	4.970
							1156	4.090
							1226	3.350
							1256	2.750
							1326	2.120
							1356	1.730
							1426	1.560
							1456	1.350
							1526	1.140
							1556	0.990
							1626	0.880
							1656	0.760
							1726	0.690
							1756	0.620
							1826	0.590
							1856	0.540
							1956	0.470
							2056	0.420
							2156	0.390
							2256	0.360
				3-24			2400	0.340
							330	0.310
							630	0.280
							830	0.260
							1030	0.230
							1130	0.210
							1230	0.190
							1330	0.170
							1430	0.140
							1530	0.120
							1630	0.100
							1730	0.090
							1830	0.080
							2030	0.080
							2400	0.080

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.003210.



EVENT OF MARCH 23 - 24, 1969
 RIESEL (WACO), TEXAS WATERSHED Y

RIESEL (WACO), TEXAS WATERSHED Y-2

LOCATION: Falls Co., Texas; 18 mi. SE Waco; Brazos River Basin.

AREA: 132.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)								RIESEL (WACO), TEXAS				WATERSHED Y-2			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	1.03	2.56	4.29	4.25	1.54	0.33	0.06	2.39	1.67	6.37	1.92	3.67	30.08	
	Q	0.0	0.283	1.264	0.831	0.166	0.0	0.0	0.0	0.0	0.034	0.0	0.683	3.261	
STA AV	P	2.22	2.66	2.56	4.02	4.43	3.49	1.55	2.09	2.59	2.62	3.00	2.52	33.75	
	Q	0.454	0.584	0.672	0.936	1.138	0.585	0.127	0.046	0.094	0.113	0.338	0.445	5.531	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-23	0.340	3-23	0.244	3-23	0.348	3-23	0.467	3-23	0.492	12- 5	0.600	12- 5	0.660
MAXIMUMS FOR PERIOD OF RECORD															
		5- 1	4.070	5- 1	3.110	5- 1	5.470	5- 1	7.080	5- 1	7.280	5- 1	7.460	4-30	9.640
		1944		1944		1944		1944		1944		1944		1944	

NOTES: Watershed conditions: 19% cotton; 18% fall planted small grain, largely oats; 29% row grain sorghum; 33% pasture; 1% gravel and paved roads. Cropland terraced, contour cultivation, conservation treatment since 1942. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 42.11-5 (Revised). Precipitation and runoff records began Jan. 1, 1939. Precipitation data from Thiessen weighted method using rain gages 69, 69B, 70, 75A, and 84A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969					DAILY PRECIPITATION (inches)					RIESEL (WACO), TEXAS					WATERSHED Y-2		
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
	1	0.03	0.03E	0.0	0.0	0.16E	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	2	0.17	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.09E	0.0	0.17	0.0				
	3	0.0	0.0	0.0	0.0	0.05E	0.33	0.0	0.0	0.06E	0.0	0.0	0.0				
	4	0.0	0.0	0.0	0.45	0.04E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0				
	5	0.0	0.04E	0.36	0.05E	0.85	0.0	0.0	0.08E	0.0	0.07E	0.0	2.22				
	6	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.65				
	7	0.0	0.08E	0.17	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E				
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0				
	12	0.0	0.0	0.0	1.80	0.0	0.0	0.0	0.0	0.0	1.32	0.0	0.0				
	13	0.0	0.39	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	14	0.0	1.14	0.30	0.0	0.0 E	0.0	0.0	0.10E	0.0	0.0	0.0	0.0				
	15	0.0	0.0	1.45	0.0	0.01E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0				
	16	0.17	0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.45	0.0	0.05	0.0				
	17	0.0	0.0	0.15	0.67	0.08E	0.0	0.0	0.0	0.0	0.0	0.34	0.0				
	18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.76	0.0				
	19	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	20	0.0	0.14	0.0	0.05E	0.0	0.0	0.06E	0.0	0.35	0.0	0.0	0.0				
	21	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.16	0.0	0.0	0.0	0.0				
	23	0.0	0.0	1.06	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0				
	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0				
	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.06	0.0				
	27	0.0	0.0	0.0	1.18	0.0	0.0	0.0	0.24	0.0	1.41	0.14	0.0				
	28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.31E	0.0	1.06	0.0	0.11E				
	29	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.38	0.0	0.68				
	30	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.09E	0.0	2.14	0.0	0.0 S				
	31	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
TOTAL		1.03	2.56	4.29	4.25	1.54	0.33	0.06	2.39	1.67	6.37	1.92	3.67				
STA AV		2.22	2.66	2.56	4.02	4.43	3.49	1.55	2.09	2.59	2.62	3.00	2.52				

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 69, 69B, 70, 75A, and 84A. Records began Jan. 1, 1939. STA AV based on 31 yr period.

1969						BIESSEL (WACO), TEXAS WATERSHED Y-2						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.014	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.086	0.008	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.019	0.010	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.116	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.140	0.044	0.681	0.0	0.0	0.0	0.0	0.0	0.0	1.446
6	0.0	0.0	0.030	0.010	0.032	0.0	0.0	0.0	0.0	0.0	0.0	2.152
7	0.0	0.0	0.002	0.006	0.088	0.0	0.0	0.0	0.0	0.0	0.0	0.074
8	0.0	0.0	0.022	0.002	0.079	0.0	0.0	0.0	0.0	0.0	0.0	0.006
9	0.0	0.0	0.0	0.009	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	2.489	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.241	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.796	0.001	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.027	2.918	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.299	0.013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.221	0.885	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.198	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.028	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.002	0.006	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.680	0.004	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.057	0.054	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.006	2.791	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.060	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.023	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.019	0.618	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.012	0.021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.013
30	0.0	0.0	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.189	0.0	0.096
31	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0560	0.2261	0.1537	0.0296	0.0	0.0	0.0	0.0	0.0061	0.0	0.1221
INCHES	0.0	0.283	1.264	0.831	0.166	0.0	0.0	0.0	0.0	0.034	0.0	0.683
STA AV	0.454	0.584	0.672	0.936	1.138	0.585	0.127	0.046	0.094	0.113	0.338	0.445

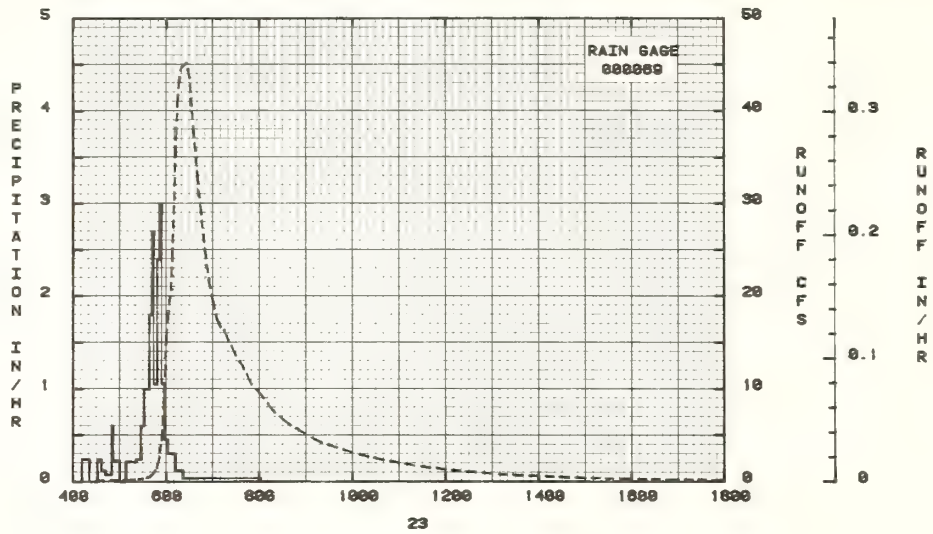
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.180314. Records began Jan. 1, 1939. STA AV based on 31 yr period.

1969 SELECTED RUNOFF EVENT						BIESSEL (WACO), TEXAS WATERSHED Y-2					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969											
RG 000069			RG 000069								
3-23	0.0	0.004	3-23	412	0.0	0.0	3-23	430	0.110	0.0	
				417	0.2400	0.02		500	0.160	0.0005	
				422	0.2400	0.04		505	0.180	0.0006	
				432	0.0	0.04		510	0.190	0.0007	
				437	0.2400	0.06		515	0.220	0.0008	
WATERSHED CONDITIONS:											
33% pasture, Bermudagrass											
and native grass, good cover,											
moderately grazed; 48% tilled, bare; 18% fall planted											
small grain, 8 inches high;											
1% gravel roads. Cropland											
terraced, cultivated on contour.											
				522	0.2143	0.18		540	0.590	0.0018	
				527	0.2400	0.20		542	0.760	0.0020	
				532	0.6000	0.25		544	0.960	0.0022	
				538	1.0000	0.35		546	1.180	0.0025	
				540	1.8000	0.41		548	1.480	0.0028	
				542	1.8000	0.47		549	1.850	0.0030	
				544	2.7000	0.56		550	2.180	0.0033	
				548	1.0500	0.63		551	2.666	0.0036	
				552	2.4000	0.79		552	3.210	0.0040	
				554	2.9999	0.89		553	3.890	0.0044	
				558	1.0500	0.96		554	4.440	0.0049	
				602	0.4500	0.99		555	5.500	0.0055	
				612	0.3000	1.04		556	7.050	0.0063	
				622	0.1200	1.06		557	8.910	0.0073	
				802	0.0360	1.12		558	10.630	0.0085	
								559	12.530	0.0099	
								600	14.990	0.0116	
								601	16.410	0.0136	
								602	17.490	0.0157	
								603	18.400	0.0179	
								604	19.350	0.0203	
								605	19.980	0.0228	
								606	20.680	0.0253	
								607	23.090	0.0280	
								608	25.160	0.0311	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.007513.

1969	SELECTED RUNOFF EVENT					BIESEL (WACO), TEXAS		WATERSHED 1-2			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)											
							3-23	610	29.720	0.0379	
								611	32.770	0.0418	
								612	35.440	0.0461	
								613	38.180	0.0507	
								615	41.770	0.0607	
								617	43.650	0.0714	
								620	44.770	0.0880	
								626	45.210	0.1218	
								628	44.510	0.1331	
								630	43.560	0.1442	
								635	37.940	0.1657	
								640	32.920	0.1919	
								645	28.830	0.2113	
								650	24.810	0.2281	
								655	21.610	0.2426	
								700	19.400	0.2555	
								705	17.580	0.2671	
								710	16.670	0.2778	
								715	16.310	0.2881	
								720	15.270	0.2980	
								730	13.610	0.3161	
								740	12.190	0.3322	
								750	10.490	0.3464	
								800	9.560	0.3590	
								820	7.440	0.3803	
								840	6.070	0.3972	
								900	5.090	0.4112	
								920	4.150	0.4228	
								940	3.650	0.4326	
								1000	3.100	0.4411	
								1020	2.690	0.4483	
								1040	2.320	0.4546	
								1100	2.010	0.4600	
								1120	1.700	0.4646	
								1140	1.470	0.4686	
								1200	1.280	0.4720	
								1230	1.040	0.4764	
								1300	0.810	0.4799	
								1330	0.660	0.4827	
								1400	0.570	0.4850	
								1430	0.440	0.4869	
								1500	0.350	0.4884	
								1600	0.270	0.4907	
								1700	0.190	0.4924	
								1800	0.150	0.4937	
								1900	0.160	0.4949	
								2000	0.130	0.4960	
								2200	0.110	0.4978	
								2400	0.110	0.4995	
							3-24	600	0.100	0.5042	
								800	0.090	0.5056	
								1000	0.070	0.5068	
								1200	0.050	0.5077	
								1400	0.040	0.5084	
								1600	0.030	0.5089	
								1800	0.020	0.5093	
								2100	0.020	0.5098	
								2400	0.030	0.5104	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.007513.



EVENT OF MARCH 23 - 24, 1969
 RIESEL (WACO), TEXAS WATERSHED Y-2

RIESEL (WACO), TEXAS WATERSHED Y-6

LOCATION: Falls Co., Texas; 18 mi. SE of Waco,; Brazos River Basin.

AREA: 16.30 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED Y-6			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	1.03	2.55	4.27	4.24	1.59	0.33	0.06	2.49	1.63	6.43	1.89	3.68	30.18			
	Q	0.0	0.026	0.639	0.072	0.010	0.0	0.0	0.0	0.0	0.014	0.0	0.531	1.293			
STA AV	P	2.08	2.70	2.21	4.01	3.96	3.73	1.51	2.13	2.59	2.83	2.97	2.32	33.05			
	Q	0.297	0.356	0.342	0.670	0.797	0.586	0.115	0.046	0.102	0.213	0.340	0.290	4.155			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge				Maximum Volume for Selected Time Interval											
		Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	6 Hours Date	Vol.	12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.
1969		3-23	0.135	3-23	0.120	3-23	0.206	3-23	0.315	3-23	0.331	12- 5	0.373	12- 5	0.475	3-15	0.594
MAXIMUMS FOR PERIOD OF RECORD																	
		6-10 1941	3.790	3-29 1965	1.900	3-29 1965	2.340	3-29 1965	2.950	3-29 1965	3.130	3-29 1965	3.670	11-22 1940	4.870	4-19 1957	8.490

NOTES: Watershed conditions: 93% fall planted small grain; 5% pasture; 2% gravel roads. Cropland terraced and contour tilled; no change in conservation practices. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 42.11-5 (Revised). Precipitation and runoff records began Jan. 1939; station not in operation July 1943 to May 1, 1947; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages 69B and 75A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED Y-6	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.04	0.03E	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.16	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.07E	0.0	0.17	0.0		
3	0.0	0.0	0.0	0.0	0.06E	0.33	0.0	0.0	0.09	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.47	0.05E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.36	0.04E	0.87	0.0	0.0	0.08E	0.0	0.07E	0.0	2.25		
6	0.0	0.0	0.0	0.0	0.13E	0.0	0.0	0.0	0.0	0.0	0.0	0.65		
7	0.0	0.08E	0.16	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	0.0	1.30	0.0	0.0		
13	0.0	0.40	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.14	0.30	0.0	0.0 E	0.0	0.0	0.11E	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.44	0.0	0.01E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0		
16	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0-	0.47	0.0	0.06	0.0		
17	0.0	0.0	0.17	0.66	0.08E	0.0	0.0	0.0	0.0	0.0	0.33	0.0		
18	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.0		
19	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.13	0.0	0.04E	0.0	0.0	0.06E	0.0	0.29	0.0	0.0	0.0		
21	0.0	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.19	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.04	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.06	0.0		
27	0.0	0.0	0.0	1.17	0.0	0.0	0.0	0.22	0.0	1.40	0.15	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.35	0.0	1.06	0.0	0.14E		
29	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.39	0.0	0.65		
30	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	2.21	0.0	0.0 S		
31	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.03	2.55	4.27	4.24	1.59	0.33	0.06	2.49	1.63	6.43	1.89	3.68		
STA AV	2.08	2.70	2.21	4.01	3.96	3.73	1.51	2.13	2.59	2.83	2.97	2.32		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 69B and 75A. Records began Jan. 1939; station not in operation July 1943 to May 1, 1947; part-year amounts not included in averages. STA AV based on 26 yr period.

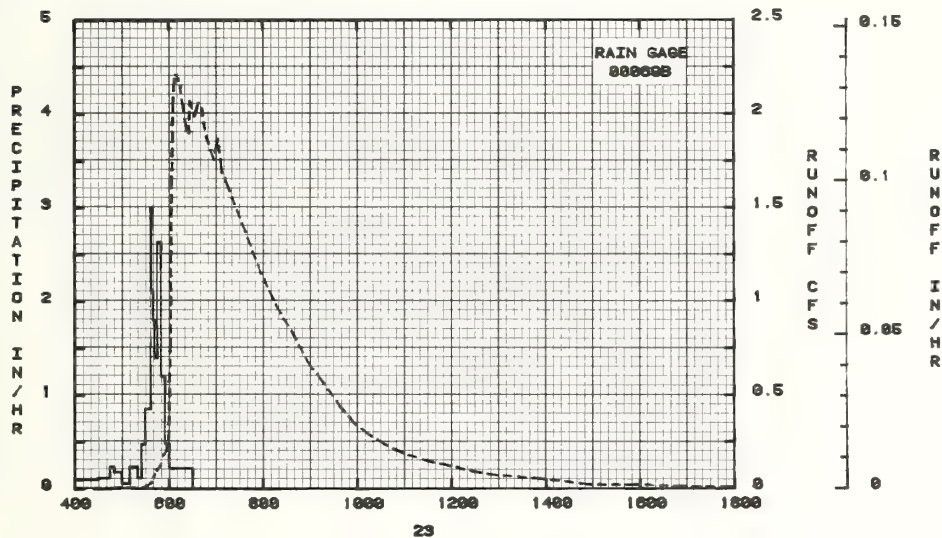
1969 MEAN DAILY DISCHARGE (cfs)													RIESEL (WACO), TEXAS WATERSHED Y-6			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
5	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.070				
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.234				
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.027				
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.006				
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
12	0.0	0.0	0.0	0.032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
14	0.0	0.008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
15	0.0	0.0	0.193	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
16	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
17	0.0	0.0	0.003	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
18	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
21	0.0	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
23	0.0	0.0	0.228	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
27	0.0	0.0	0.0	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010				
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.013				
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002				
MEAN	0.0	0.0006	0.0141	0.0017	0.0002	0.0	0.0	0.0	0.0	0.0003	0.0	0.0117				
INCHES	0.0	0.026	0.639	0.072	0.010	0.0	0.0	0.0	0.0	0.014	0.0	0.531				
STA AV	0.297	0.356	0.342	0.670	0.797	0.586	0.115	0.046	0.102	0.213	0.340	0.290				

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 1.460215. Records began Jan. 1939; station not in operation July 1943 to May 1, 1947; part-year amounts not included in averages. STA AV based on 26 yr period.

1969			SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS			WATERSHED Y-6		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23, 1969											
RG 00069B			RG 00069B								
3-23	0.0	0.0	3-23	400	0.0	0.0	3-23	430	0.0	0.0	
				430	0.1000	0.05		458	0.010	0.0001	
				445	0.1200	0.08		508	0.010	0.0002	
				450	0.2400	0.10		518	0.010	0.0003	
				500	0.1800	0.13		528	0.010	0.0004	
WATERSHED CONDITIONS:				510	0.0600	0.14		533	0.020	0.0005	
93% fall planted small grain,				520	0.2400	0.18		536	0.030	0.0006	
8 inches high; 5% pasture,				525	0.1200	0.19		538	0.040	0.0007	
Bermudagrass, good cover,				530	0.4800	0.23		540	0.060	0.0008	
moderately grazed; 2% gravel				537	0.8572	0.33		542	0.080	0.0009	
roads. Cropland terraced,				538	2.9999	0.38		544	0.100	0.0011	
cultivated on contour.				540	2.1000	0.45		546	0.110	0.0013	
				542	1.8000	0.51		548	0.120	0.0015	
				545	1.4000	0.58		550	0.140	0.0018	
				550	2.6400	0.80		552	0.180	0.0021	
				555	1.2000	0.90		554	0.190	0.0025	
				600	0.4800	0.94		556	0.200	0.0029	
				630	0.2200	1.05		558	0.230	0.0033	
								559	0.270	0.0036	
								600	0.350	0.0039	
								601	0.580	0.0044	
								602	0.800	0.0051	
								603	1.270	0.0061	
								604	1.630	0.0076	
								605	1.870	0.0094	
								606	2.090	0.0114	
								608	2.190	0.0158	
								610	2.210	0.0202	
								611	2.210	0.0224	
								612	2.190	0.0247	
								613	2.180	0.0269	
								615	2.150	0.0313	
								618	2.050	0.0377	
								623	1.920	0.0478	
								626	1.900	0.0536	

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS			WATERSHED Y-6		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF MARCH 23, 1969 (CONTINUED)								
							3-23	
							627	2.070
							633	1.990
							638	2.060
							643	2.030
							648	1.880
							658	1.760
							703	1.870
							708	1.690
							718	1.590
							738	1.370
							758	1.150
							818	0.970
							838	0.830
							858	0.670
							918	0.560
							938	0.440
							958	0.340
							1018	0.280
							1038	0.230
							1058	0.190
							1128	0.150
							1158	0.120
							1228	0.090
							1258	0.070
							1358	0.050
							1458	0.020
							1558	0.020
							1658	0.010
							1800	0.010
							2100	0.0
							2400	0.0

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.060842.



EVENT OF MARCH 23, 1969
RIESEL (WACO), TEXAS WATERSHED Y-6

RIESEL (WACO), TEXAS WATERSHED Y-7

LOCATION: Falls Co., Texas; 18 mi. SE of Waco; Brazos River Basin.

AREA: 40.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED Y-7	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	1.05	2.59	4.09	4.49	1.59	0.35	0.06	2.78	1.44	6.42	1.90	3.67	30.44	
	Q	0.0	0.321	1.527	1.075	0.088	0.0	0.0	0.0	0.0	0.0	0.0	0.757	3.768	
STA AV	P	2.11	2.74	2.23	4.10	3.97	3.69	1.48	2.19	2.53	2.85	3.02	2.34	33.26	
	Q	0.353	0.475	0.502	0.884	0.951	0.694	0.109	0.111	0.157	0.194	0.437	0.372	5.237	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date							
1969	3-23	0.425	3-23	0.329	3-23	0.477	3-23	0.631	4-12	0.691	4-12	0.725	12- 5	0.757	3-15 1.281
MAXIMUMS FOR PERIOD OF RECORD															
	6-10 1941	3.590	4-19 1957	2.340	3-29 1965	2.960	3-29 1965	3.580	3-29 1965	3.840	3-29 1965	4.660	11-22 1940	5.370	4-19 1957 8.890

NOTES: Watershed conditions: 100% pasture, Bermudagrass, moderately grazed. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 42.11-5 (Revised). Precipitation and runoff records began Jan. 1939; station not in operation from July 1943 to May 1, 1947; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages 89 and W-2A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)														RIESEL (WACO), TEXAS WATERSHED Y-7	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.03	0.03E	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.19	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.07E	0.0	0.18	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.04E	0.35	0.0	0.0	0.07E	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.48	0.02E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.38	0.08E	0.91	0.0	0.0	0.06E	0.0	0.06E	0.0	0.0	2.53		
6	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39		
7	0.0	0.05E	0.18	0.0	0.14E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.12E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.85	0.0	0.0	0.0	0.0	0.0	1.29	0.0	0.0	0.0		
13	0.0	0.32	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.22	0.22	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.33	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.18	0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.56	0.0	0.04	0.0	0.0		
17	0.0	0.0	0.18	0.74	0.12E	0.0	0.0	0.0	0.0	0.0	0.38	0.0	0.0		
18	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.0	0.0		
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.13E	0.0	0.04E	0.0	0.0	0.06E	0.0	0.04E	0.0	0.0	0.0	0.0		
21	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.24	0.0	0.0	0.0	0.0	1.48	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.02	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.04	0.0	0.0		
27	0.0	0.0	0.0	1.24	0.0	0.0	0.00E	0.23	0.0	1.44	0.17	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.35	0.0	1.04	0.0	0.10E	0.0		
29	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.35	0.0	0.65	0.0		
30	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.23E	0.0	2.24	0.0	0.0 S	0.0		
31	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.05	2.59	4.09	4.49	1.59	0.35	0.06	2.78	1.44	6.42	1.90	3.67			
STA AV	2.11	2.74	2.23	4.10	3.97	3.69	1.48	2.19	2.53	2.85	3.02	2.34			

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 89 and W-2A. Records began Jan. 1939; station not in operation from July 1943 to May 1, 1947; part-year amounts not included in averages. STA AV based on 26 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					RIESEL (WACO), TEXAS					WATERSHED Y-7	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.029	0.0	0.140	0.0	0.0	0.0	0.0	0.0	0.0	0.573
6	0.0	0.0	0.023	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.693
7	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.006
8	0.0	0.0	0.012	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	1.186	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.048	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.149	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.012	1.166	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.081	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.047	0.387	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.071	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.353	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	1.126	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.179	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0192	0.0828	0.0602	0.0048	0.0	0.0	0.0	0.0	0.0	0.0	0.0410
INCHES	0.0	0.321	1.527	1.075	0.088	0.0	0.0	0.0	0.0	0.0	0.0	0.757
STA AV	0.353	0.475	0.502	0.884	0.951	0.694	0.109	0.111	0.157	0.194	0.437	0.372

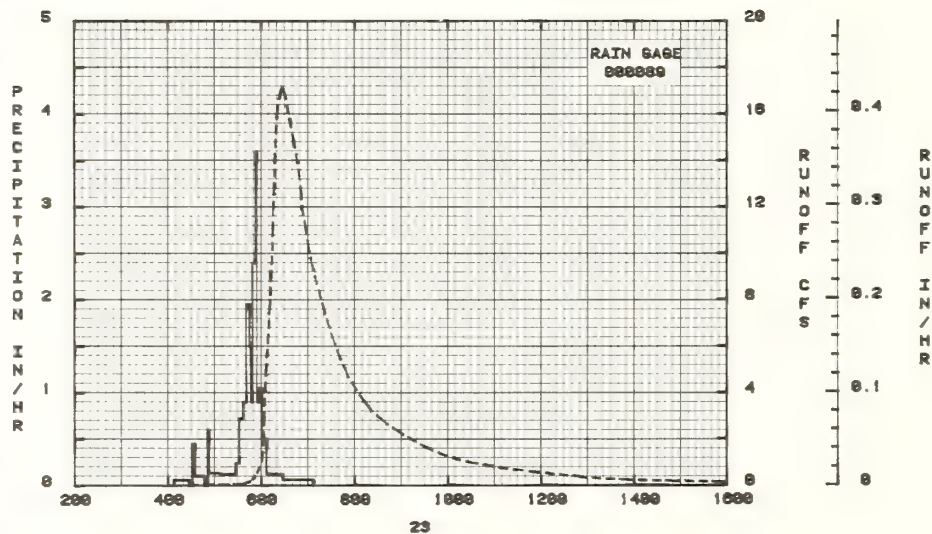
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.595038. Records began Jan. 1939; station not in operation from July 1943 to May 1, 1947; part-year amounts not included in averages. STA AV based on 26 yr period.

1969	SELECTED RUNOFF EVENT					RIESEL (WACO), TEXAS					WATERSHED Y-7	
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF						
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF MARCH 23, 1969												
RG 000089			RG 000089									
3-23	0.0	0.001	3-23	407	0.0	0.0	3-23	428	0.010	0.0		
				417	0.0600	0.01		438	0.010	0.0		
				427	0.0600	0.02		448	0.020	0.0001		
				431	0.0	0.02		458	0.030	0.0002		
				435	0.4500	0.05		508	0.030	0.0003		
WATERSHED CONDITIONS: 100% pasture, Bermudagrass, fair cover, moderately grazed.				447	0.1000	0.07		528	0.040	0.0006		
				451	0.0	0.07		533	0.050	0.0007		
				453	0.6000	0.09		538	0.070	0.0008		
				507	0.1286	0.12		540	0.090	0.0009		
				517	0.1200	0.14		543	0.130	0.0010		
				527	0.1200	0.16		546	0.180	0.0012		
				532	0.2400	0.18		549	0.280	0.0015		
				537	0.7200	0.24		552	0.400	0.0019		
				541	0.9000	0.30		555	0.550	0.0025		
				545	1.9500	0.43		558	0.770	0.0033		
				547	1.5000	0.48		601	1.120	0.0045		
				549	0.9000	0.51		602	1.440	0.0050		
				553	2.4000	0.67		603	2.010	0.0057		
				555	3.6001	0.79		604	3.140	0.0068		
				557	0.9000	0.82		605	4.140	0.0083		
				601	1.0500	0.89		606	4.930	0.0102		
				607	0.5000	0.94		607	5.550	0.0124		
				627	0.1200	0.98		609	6.500	0.0174		
				707	0.0600	1.02		611	7.630	0.0232		
								613	8.960	0.0301		
								614	9.860	0.0340		
								615	11.050	0.0384		
								616	11.930	0.0431		
								617	13.020	0.0482		
								618	14.300	0.0538		
								620	15.500	0.0662		
								622	16.360	0.0793		
								624	16.790	0.0930		
								627	17.130	0.1140		
								628	17.130	0.1211		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.024793.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED Y-7							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23, 1969 (CONTINUED)										
				3-23				632	16.660	0.1490
								637	15.730	0.1824
								642	14.850	0.2141
								647	13.890	0.2438
								650	13.170	0.2606
								652	12.350	0.2711
								654	11.660	0.2811
								657	11.140	0.2952
								702	10.080	0.3171
								707	9.280	0.3371
								712	8.670	0.3557
								722	7.380	0.3888
								732	6.360	0.4172
								742	5.440	0.4416
								752	4.680	0.4625
								802	4.120	0.4807
								812	3.630	0.4967
								822	3.180	0.5108
								842	2.630	0.5348
								902	2.190	0.5547
								930	1.650	0.5769
								940	1.510	0.5834
								958	1.240	0.5936
								1028	0.970	0.6073
								1058	0.790	0.6182
								1128	0.650	0.6271
								1158	0.530	0.6344
								1258	0.320	0.6449
								1358	0.200	0.6513
								1458	0.160	0.6558
								1558	0.110	0.6591
								1658	0.080	0.6615
								1758	0.060	0.6632
								1958	0.040	0.6657
								2158	0.030	0.6674
								2400	0.020	0.6687

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.024793.



EVENT OF MARCH 23, 1969
RIESEL (WACO), TEXAS WATERSHED Y-7

RIESEL (WACO), TEXAS WATERSHED Y-8

LOCATION: Falls Co., Texas; 18 mi. SE of Waco; Brazos River Basin.

AREA: 20.80 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED Y-8															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	1.02	2.49	4.11	4.33	1.52	0.33	0.05	2.45	1.55	6.36	1.91	3.53	29.65															
	Q	0.0	0.042	0.637	0.645	0.113	0.0	0.0	0.0	0.0	0.023	0.0	0.534	1.994															
STA AV	P	2.00	2.71	2.31	4.11	3.87	3.87	1.55	2.17	2.69	2.95	3.05	2.35	33.62															
	Q	0.334	0.400	0.407	0.804	0.859	0.643	0.127	0.064	0.137	0.129	0.391	0.316	4.613															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
Maximum Discharge																													
Maximum Volume for Selected Time Interval																													
Date		Rate		1 Hour Vol.		2 Hours Vol.		6 Hours Vol.		12 Hours Vol.		1 Day Vol.		2 Days Vol.		8 Days Vol.													
1969		3-23	0.242	3-23	0.169	3-23	0.229	4-12	0.315	4-12	0.382	12- 5	0.513	12- 5	0.534	3-15	0.591												
MAXIMUMS FOR PERIOD OF RECORD																													
		6-10	3.290	4-19	2.410	4-19	2.800	4-23	3.320	4-23	3.370	3-29	3.590	11-22	5.640	4-19	9.100												
		1941		1957		1957		1957		1957		1965		1940		1957													

NOTES: Watershed conditions: 95% grain sorghum; 3% pasture; 2% gravel roads. Cropland terraced and contour tilled; no change in conservation practices. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 42.11-5 (Revised). Precipitation and runoff records began Mar. 1, 1939; station not in operation July 1943 to Jan. 1, 1949; part-year amounts not included in averages. Precipitation data obtained from rain gage 75A. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)														RIESEL (WACO), TEXAS WATERSHED Y-8													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.03	0.03E	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
2	0.17	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.17	0.0															
3	0.0	0.0	0.0	0.0	0.07E	0.33	0.0	0.0	0.05	0.0	0.0	0.0															
4	0.0	0.0	0.0	0.48	0.04E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0															
5	0.0	0.03E	0.35	0.06E	0.84	0.0	0.0	0.07E	0.0	0.06E	0.0	0.0															
6	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.64															
7	0.0	0.07E	0.17	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
9	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E															
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0															
12	0.0	0.0	0.0	1.75	0.0	0.0	0.0	0.0	0.0	1.32	0.0	0.0															
13	0.0	0.37	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
14	0.0	1.11	0.30	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.0	0.0															
15	0.0	0.0	1.32	0.0	0.01E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0															
16	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.04	0.0															
17	0.0	0.0	0.14	0.71	0.09E	0.0	0.0	0.0	0.0	0.0	0.36	0.0															
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0															
19	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
20	0.0	0.14	0.0	0.04E	0.0	0.0	0.05E	0.0	0.20	0.0	0.0	0.0															
21	0.0	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.28	0.0	0.0	0.0	0.0															
23	0.0	0.0	1.03	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0															
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0															
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.06	0.0															
27	0.0	0.0	0.0	1.23	0.0	0.0	0.0	0.22	0.0	1.31	0.14	0.0															
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.32	0.0	1.07	0.0	0.09E															
29	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.40	0.0	0.64															
30	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	2.20	0.0	0.0 S															
31	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
TOTAL	1.02	2.49	4.11	4.33	1.52	0.33	0.05	2.45	1.55	6.36	1.91	3.53															
STA AV	2.00	2.71	2.31	4.11	3.87	3.87	1.55	2.17	2.69	2.95	3.05	2.35															

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage 75A. Records began Mar. 1, 1939; station not in operation July 1943 to Jan. 1, 1949; part-year amounts not included in averages. STA AV based on 24 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					BIESSEL (WACO), TEXAS					WATERSHED Y-8	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.003	0.0	0.062	0.0	0.0	0.0	0.0	0.0	0.0	0.150
6	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.317
7	0.0	0.0	0.0	0.0	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.015	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.347	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.011	0.0	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.001	0.167	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.038	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.036	0.088	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.026	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.004	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.282	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.075	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.020	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0013	0.0180	0.0188	0.0032	0.0	0.0	0.0	0.0	0.0006	0.0	0.0151
INCHES	0.0	0.042	0.637	0.645	0.113	0.0	0.0	0.0	0.0	0.023	0.0	0.534
STA AV	0.334	0.400	0.407	0.804	0.859	0.643	0.127	0.064	0.137	0.129	0.391	0.316

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 1.144303. Records began Mar. 1, 1939; station not in operation July 1943 to Jan. 1, 1949; part-year amounts not included in averages. STA AV based on 24 yr period.

1969	SELECTED RUNOFF EVENT			BIESSEL (WACO), TEXAS WATERSHED Y-8							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF MARCH 23, 1969											
RG 00075A			RG 00075A								
3-23	0.0	0.0	3-23	409	0.0	0.0	3-23	430	0.0	0.0	
				429	0.0900	0.03		450	0.010	0.0001	
				449	0.0	0.03		455	0.010	0.0001	
				454	0.3600	0.06		500	0.010	0.0001	
				509	0.0800	0.08		505	0.010	0.0001	
WATERSHED CONDITIONS:				519	0.3000	0.13		510	0.020	0.0002	
95% seed bed prepared for				529	0.0	0.13		515	0.020	0.0003	
sorghum, not yet planted;				539	0.1800	0.16		520	0.030	0.0004	
3% pasture, Bermuda-				549	0.1800	0.19		525	0.030	0.0005	
grass, good cover, moderately				554	0.7200	0.25		530	0.040	0.0006	
grazed; 2% gravel roads.				559	0.9600	0.33		535	0.070	0.0008	
Cropland terraced, cultivated				603	1.9500	0.46		538	0.080	0.0010	
on contour.				606	1.0000	0.51		540	0.120	0.0012	
				609	2.2000	0.62		542	0.160	0.0014	
				611	3.0001	0.72		544	0.240	0.0017	
				613	2.6999	0.81		546	0.370	0.0022	
				615	0.6000	0.83		548	0.530	0.0029	
				619	1.0500	0.90		550	0.840	0.0040	
				624	0.4800	0.94		552	1.190	0.0056	
				629	0.2400	0.96		554	1.670	0.0079	
				649	0.1200	1.00		556	2.440	0.0112	
				919	0.0	1.00		558	3.190	0.0157	
				1000	0.0439	1.03		559	3.480	0.0183	
								600	3.740	0.0212	
								601	3.920	0.0242	
								602	4.130	0.0274	
								604	4.640	0.0344	
								606	5.020	0.0420	
								610	5.070	0.0580	
								615	4.850	0.0777	
								620	4.300	0.0959	
								625	3.760	0.1119	
								630	3.330	0.1260	
								635	3.300	0.1392	
								640	2.740	0.1512	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.047679.

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.047679.



RIESEL (WACO), TEXAS WATERSHED Y-10

LOCATION: Falls Co., Texas; 18 mi. SE of Waco; Brazos River Basin.

AREA: 18.60 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED Y-10			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	1.04	2.60	4.40	4.17	1.58	0.33	0.06	2.46	1.72	6.44	1.91	3.75	30.46			
	Q	0.0	0.099	1.393	0.570	0.135	0.0	0.0	0.0	0.0	0.541	0.002	0.896	3.634			
STA AV	P	2.15	2.61	2.25	3.99	3.97	3.62	1.48	2.12	2.59	2.73	2.91	2.36	32.78			
	Q	0.429	0.408	0.489	0.908	0.763	0.658	0.143	0.084	0.195	0.196	0.405	0.357	5.034			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Date	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days	
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-23	0.737	10-30	0.462	10-30	0.517	10-30	0.541	10-30	0.541	12- 5	0.808	12- 5	0.887	3-15	1.312
MAXIMUMS FOR PERIOD OF RECORD																	
		4-19	3.730	4-19	2.900	4-19	3.480	3-29	4.130	3-29	4.270	3-29	4.620	4-23	5.340	4-19	10.570
		1957		1957		1957		1965		1965		1965		1957		1957	

NOTES: Watershed conditions: 93% cotton; 4% pasture; 3% gravel roads. Cropland terraced and contour tilled; no change in conservation practices. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 42.11-5 (Revised). Precipitation and runoff records began July 1, 1938; station not in operation July 1943 to May 1, 1946; part-year amounts not included in averages. Precipitation data from Thiessen weighted method using rain gages 69 and 69B. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969		DAILY PRECIPITATION (inches)					RIESEL (WACO), TEXAS				WATERSHED Y-10		
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1	0.04	0.03E	0.0	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	0.16	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.07E	0.0	0.17	0.0
	3	0.0	0.0	0.0	0.0	0.04E	0.33	0.0	0.0	0.08E	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.43	0.05E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0
	5	0.0	0.04E	0.37	0.04E	0.87	0.0	0.0	0.08E	0.0	0.07E	0.0	2.25
	6	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.67
	7	0.0	0.08E	0.16	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0
	12	0.0	0.0	0.0	1.83	0.0	0.0	0.0	0.0	0.0	1.32	0.0	0.0
	13	0.0	0.41	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	1.16	0.30	0.0	0.0 E	0.0	0.0	0.11E	0.0	0.0	0.0	0.0
	15	0.0	0.0	1.53	0.0	0.02E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0
	16	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.06	0.0
	17	0.0	0.0	0.17	0.63	0.07E	0.0	0.0	0.0	0.0	0.0	0.32	0.0
	18	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0
	19	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	20	0.0	0.13	0.0	0.05E	0.0	0.0	0.06E	0.0	0.41	0.0	0.0	0.0
	21	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.11	0.0	0.0	0.0	0.0
	23	0.0	0.0	1.07	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0	0.0
	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0
	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.06	0.0
	27	0.0	0.0	0.0	1.14	0.0	0.0	0.0	0.24	0.0	1.45	0.15	0.0
	28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.35	0.0	1.06	0.0	0.14E
	29	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.37	0.0	0.69
	30	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	2.16	0.0	0.0 S
	31	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	1.04	2.60	4.40	4.17	1.58	0.33	0.06	2.46	1.72	6.44	1.91	3.75
	STA AV	2.15	2.61	2.25	3.99	3.97	3.62	1.48	2.12	2.59	2.73	2.91	2.36

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 69 and 69B. Records began July 1, 1938; station not in operation July 1943 to May 1, 1946; part-year amounts not included in averages. STA AV based on 27 yr period.

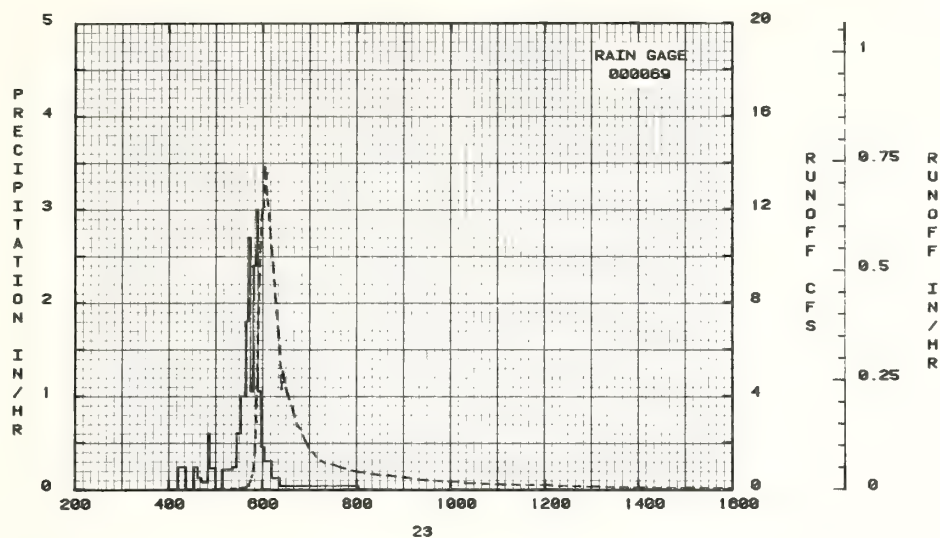
1969 MEAN DAILY DISCHARGE (cfs)													RIESEL (WACO), TEXAS WATERSHED Y-10	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.006	0.0 T	0.092	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
7	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.009		
8	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.246	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.049	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.022	0.0 T	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	0.422	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.092	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.077	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.061	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0		
19	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.036	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.015	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.005	0.422	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.423	0.0	0.005		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
MEAN	0.0	0.0027	0.0351	0.0148	0.0034	0.0	0.0	0.0	0.0	0.0136	0.0	0.0226		
INCHES	0.0	0.099	1.393	0.570	0.135	0.0	0.0	0.0	0.0	0.541	0.002	0.896		
STA AV	0.429	0.408	0.489	0.908	0.763	0.658	0.143	0.084	0.195	0.196	0.405	0.357		

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 1.279651. Records began July 1, 1938; station not in operation July 1943 to May 1, 1946; part-year amounts not included in averages. STA AV based on 27 yr period.

1969			SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS			WATERSHED Y-10		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23, 1969											
RG 000069			RG 000069								
3-23	0.0	0.0	3-23	412	0.0	0.0	3-23	400	0.0	0.0	
				417	0.2400	0.02		430	0.010	0.0001	
				422	0.2400	0.04		500	0.020	0.0005	
				432	0.0	0.04		511	0.030	0.0007	
				437	0.2400	0.06		521	0.030	0.0010	
WATERSHED CONDITIONS:				442	0.1200	0.07		526	0.040	0.0012	
93% tilled, seed bed prepared				450	0.0750	0.08		531	0.050	0.0014	
for cotton, not yet planted;				452	0.6000	0.10		536	0.070	0.0017	
4% pasture, Bermudagrass, good				500	0.2250	0.13		539	0.100	0.0019	
cover, moderately grazed; 3%				508	0.0	0.13		541	0.150	0.0021	
gravel roads. Cropland ter-											
raced, contour cultivation.				522	0.2143	0.18		542	0.180	0.0022	
				527	0.2400	0.20		543	0.230	0.0024	
				532	0.6000	0.25		544	0.310	0.0026	
				538	1.0000	0.35		545	0.390	0.0029	
				540	1.8000	0.41		546	0.510	0.0033	
				542	1.6000	0.47		547	0.610	0.0038	
				544	2.7000	0.56		548	0.780	0.0044	
				548	1.0500	0.63		549	1.140	0.0053	
				552	2.4000	0.79		550	1.630	0.0065	
				554	2.9999	0.89		551	2.560	0.0084	
				558	1.0500	0.96		552	3.720	0.0112	
				602	0.4500	0.99		553	4.760	0.0150	
				612	0.3000	1.04		554	6.600	0.0200	
				622	0.1200	1.06		555	8.120	0.0265	
				802	0.0360	1.12		556	9.260	0.0342	
								557	10.310	0.0430	
								558	10.930	0.0524	
								559	11.720	0.0624	
								600	12.050	0.0731	
								601	12.140	0.0838	
								602	13.520	0.0952	
								603	13.830	0.1073	
								604	13.580	0.1196	
								605	12.620	0.1312	
								606	12.440	0.1423	

1969 SELECTED RUNOFF EVENT			HIESEL (WACO), TEXAS			WATERSHED Y-10		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day
							Rate	Acc.
							(cfs)	(inches)
EVENT OF MARCH 23, 1969 (CONTINUED)								
						3-23	608	11.810
							610	10.760
							612	10.030
							614	9.280
							616	8.270
								0.2351
							618	7.580
							620	6.760
							622	6.080
							624	4.280
							626	5.060
								0.2908
							628	4.590
							630	4.320
							634	3.860
							639	3.400
							644	2.730
								0.3379
								0.3515
							649	2.570
							654	2.120
							659	1.760
							704	1.590
							709	1.380
								0.3898
								0.3964
							714	1.220
							719	1.120
							730	1.050
							745	0.870
							801	0.740
								0.4422
							821	0.630
							841	0.580
							901	0.490
							931	0.370
							1001	0.320
								0.4954
							1031	0.250
							1101	0.200
							1201	0.170
							1301	0.090
							1401	0.070
								0.5258
								0.5301
							1501	0.050
							1601	0.030
							1701	0.020
							1801	0.010
							1901	0.010
								0.5375
								0.5380
							2400	0.0
								0.5393

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.053319.



EVENT OF MARCH 23, 1969
 RIESEL (WACO), TEXAS WATERSHED Y-10

RIESEL (WACO), TEXAS SW-11

LOCATION: Falls County, Texas; 19 miles southeast of Waco; Brazos River Basin.

AREA: 2.66 acres

SLOPES: Slope-Percent 0-3
Percent of area 100.0

SOILS: Residual; deep, fine textured, granular, slowly permeable, alkaline throughout, slow internal drainage, Houston Black clay - 100%. Poorly defined division between topsoil and subsoil. This soil is noted for the formation of large extensive cracks upon drying.

EROSION: Erosion Class + 1 2 3 4 5
Percent of Area 0.0 100.0 0.0 0.0 0.0 0.0

LAND CAPABILITY: Class I II III IV V VI VII VIII
Percent of Area 60.0 40.0 0.0 0.0 0.0 0.0 0.0 0.0

GEOLOGY: The watershed is underlain by marls and chalks belonging to the Taylor group of the Gulf series of the Cretaceous system. The formation dip east-southeast at an angle a little steeper than the general slope of the land surface. For additional data see: Blank, H. H., et al., Geology of the Blacklands Experimental Watershed, near Waco, Texas, Bureau of Economic Geology, Univ. of Texas, Report No. 12, March, 1952.

SURFACE DRAINAGE: Good, no well defined drainageways, drainage by poorly defined natural depressions.

CHARACTER OF FLOW: Ephemeral, continuous

INSTRUMENTATION: Runoff: Type H-3 flume near center of covered concrete gutter 108 ft. long across slope to intercept and concentrate runoff, 6 hr chart. Precipitation: One weighing--recording rain gage, 6 hr chart.

WATERSHED CONDITIONS: 100% winter growing Harding grass.

GENERALLY REPRESENTS: Areas in the Blackland Prairies and Coastal Plains of Texas with perennial winter-growing grasses and improved management.

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS SW-11			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	1.05	2.59	4.09	4.49	1.59	0.35	0.06	2.78	1.44	6.42	1.90	3.67	30.43			
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.218	0.0	1.220	2.438			
STA AV	P	2.17	3.26	2.63	4.10	3.68	4.76	1.29	2.01	2.52	3.78	4.15	3.01	37.38			
	Q	0.280	0.498	0.400	0.098	0.330	1.214	0.136	0.0	0.450	0.534	1.456	0.708	6.106			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Date	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days					
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date			
1969		10-30	1.413	10-30	1.069	10-30	1.206	10-30	1.218	10-29	1.218	12- 5	1.220	12- 5	1.220	11-29	1.220
MAXIMUMS FOR PERIOD OF RECORD																	
		10-31	6.670	11-22	2.060	11-22	2.260	11-22	2.580	11-22	2.820	11-22	3.590	11-22	5.900	11-21	6.220
		1940		1940		1940		1940		1940		1940		1940		1940	

NOTES: Watershed conditions: Same as described in previous section under WATERSHED CONDITIONS. Precipitation and runoff records began March 1938; discontinued July 1943; reestablished July 1, 1969, part-year amounts not included in station averages. Precipitation data from rain gage 89. For long time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969	DAILY PRECIPITATION (inches)						BIESSEL (WACO), TEXAS SW-11					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.03	0.03	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.19	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.07E	0.0	0.18	0.0
3	0.0	0.0	0.0	0.0	0.04E	0.35	0.0	0.0	0.07E	0.0	0.0	0.0
4	0.0	0.0	0.0	0.48	0.02E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0
5	0.0	0.04E	0.38	0.08E	0.91	0.0	0.0	0.06E	0.0	0.06E	0.0	2.54
6	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.38
7	0.0	0.05E	0.18	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0
12	0.0	0.0	0.0	1.85	0.0	0.0	0.0	0.0	0.0	1.29	0.0	0.0
13	0.0	0.32	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	1.22	0.22	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0
15	0.0	0.0	1.33	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.04	0.0
17	0.0	0.0	0.18	0.74	0.12	0.0	0.0	0.0	0.0	0.0	0.38	0.0
18	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.13	0.0	0.04E	0.0	0.0	0.06E	0.0	0.04E	0.0	0.0	0.0
21	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.24	0.0	0.0	0.0	0.0	1.48	0.0	0.0	0.0	0.0
23	0.0	0.0	1.02	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.04	0.0
27	0.0	0.0	0.0	1.24	0.0	0.0	0.0	0.23	0.0	1.44	0.17	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.35	0.0	1.04	0.0	0.10E
29	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.35	0.0	0.65
30	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	2.24	0.0	0.0 S
31	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.05	2.59	4.09	4.49	1.59	0.35	0.06	2.78	1.44	6.42	1.90	3.67
STA AV	2.17	3.26	2.63	4.10	3.68	4.76	1.29	2.01	2.52	3.78	4.15	3.01

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage 89. Records began March 1938; discontinued July 1943; reestablished July 1, 1969, part-year amounts not included in averages. STA AV based on 5 yr period.

1969	MEAN DAILY DISCHARGE (cfs)						BIESSEL (WACO), TEXAS SW-11					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.078
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.058
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.136	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0044	0.0	0.0044
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.218	0.0	1.220
STA AV	0.280	0.498	0.400	0.098	0.330	1.214	0.136	0.0	0.450	0.534	1.456	0.708

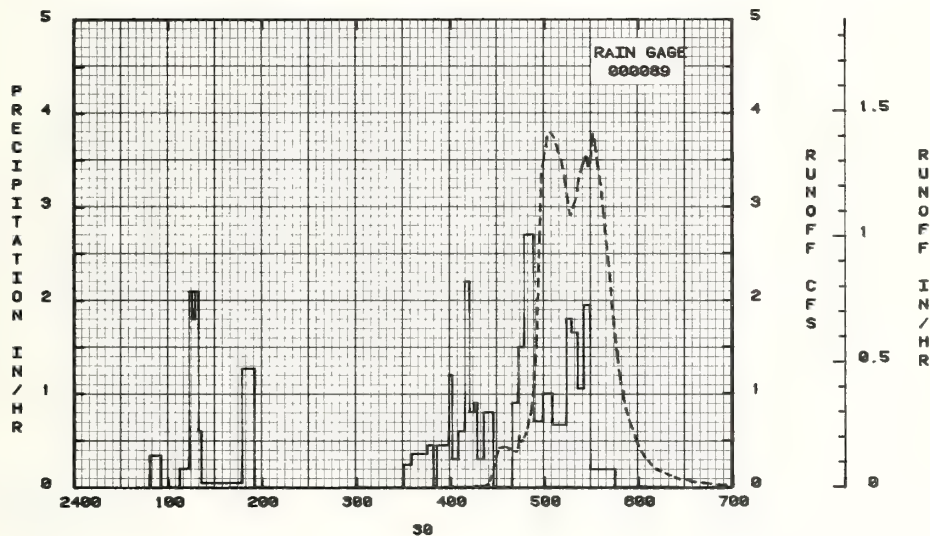
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 8.947990. Records began March 1938; discontinued July 1943; reestablished July 1, 1969, part-year amounts not included in averages. STA AV based on 5 yr period.

1969			RIESEL (WACO), TEXAS SW-11							
SELECTED RUNOFF EVENT										
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 30, 1969										
RG 000089			RG 000089							
10-30	0.0	0.0	10-30	48	0.0	0.0	10-30	356	0.0	0.0
				55	0.3429	0.04		406	0.0	0.0
				107	0.0	0.04		411	0.0	0.0
				113	0.1999	0.06		413	0.0	0.0
				115	2.1002	0.13		415	0.0	0.0
WATERSHED CONDITIONS: 100% bare. Watershed had just been seeded to Harding grass.				117	1.8000	0.19		416	0.010	0.0
				119	2.1002	0.26		422	0.010	0.0004
				121	0.5997	0.28		423	0.020	0.0005
				147	0.0462	0.30		424	0.030	0.0006
				155	1.2750	0.47		425	0.070	0.0009
				330	0.0	0.47		426	0.120	0.0015
				335	0.2401	0.49		427	0.180	0.0026
				345	0.3600	0.55		428	0.240	0.0038
				349	0.4500	0.58		429	0.320	0.0054
				351	0.0	0.58		430	0.380	0.0079
				355	0.4500	0.61		431	0.420	0.0102
				359	0.4500	0.64		433	0.430	0.0152
				401	1.2002	0.68		435	0.430	0.0208
				405	0.3001	0.70		438	0.410	0.0288
				409	0.5999	0.74		441	0.380	0.0357
				412	2.2000	0.85		442	0.380	0.0385
				415	0.7999	0.89		443	0.420	0.0408
				417	0.9000	0.92		444	0.550	0.0436
				421	0.3001	0.94		445	0.490	0.0474
				427	0.8000	1.02		446	0.500	0.0503
				439	0.0	1.02		447	0.530	0.0533
				443	0.9000	1.08		448	0.580	0.0565
				445	1.5001	1.13		449	0.630	0.0609
				447	1.5001	1.18		450	0.720	0.0648
				453	2.7000	1.45		451	0.770	0.0691
				459	0.6999	1.52		452	0.900	0.0740
				505	1.0001	1.62		453	1.080	0.0812
				514	0.6666	1.72		454	1.340	0.0882
				517	1.7999	1.81		455	1.620	0.0968
				521	1.6500	1.92		456	2.230	0.1080
				525	1.0501	1.99		457	2.730	0.1261
				529	1.9501	2.12		458	3.350	0.1438
				545	0.1875	2.17		500	3.570	0.1892
								502	3.750	0.2318
								504	3.790	0.2812
								506	3.740	0.3251
								509	3.570	0.3943
								511	3.480	0.4354
								513	3.290	0.4798
								515	3.040	0.5213
								516	2.920	0.5387
								517	2.920	0.5557
								518	2.990	0.5729
								520	3.090	0.6127
								522	3.300	0.6499
								524	3.430	0.6940
								526	3.530	0.7385
								527	3.530	0.7602
								528	3.430	0.7805
								529	3.470	0.8006
								530	3.580	0.8263
								531	3.780	0.8477
								532	3.720	0.8695
								533	3.590	0.8908
								534	3.470	0.9165
								536	3.230	0.9555
								538	2.880	0.9955
								539	2.700	1.0118
								540	2.540	1.0271
								541	2.360	1.0414
								542	2.200	1.0580
								543	1.970	1.0701
								544	1.790	1.0811
								545	1.620	1.0935
								546	1.470	1.1025
								547	1.330	1.1107
								548	1.200	1.1181
								549	1.100	1.1265
								550	1.000	1.1326
								551	0.910	1.1382

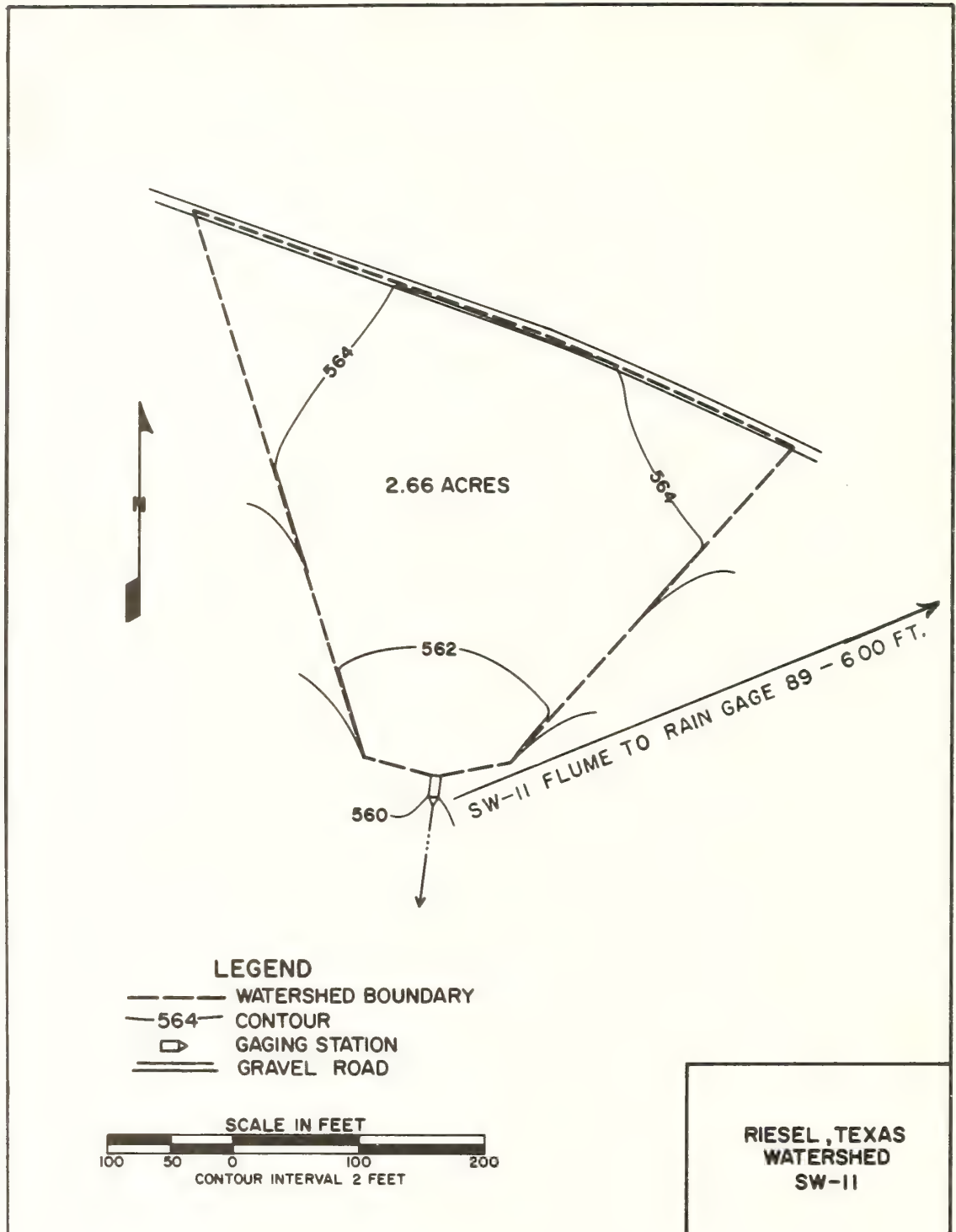
NOTES: To convert runoff in CFS to IN/HR, multiply by .372833.

1969 SELECTED RUNOFF EVENT			BIESEL (WACO), TEXAS SW-11							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 30, 1969 (CONTINUED)										
				10-30				552	0.830	1.1433
								553	0.770	1.1491
								554	0.710	1.1534
								556	0.620	1.1611
								558	0.530	1.1686
								600	0.440	1.1750
								602	0.370	1.1797
								604	0.320	1.1842
								606	0.280	1.1877
								608	0.230	1.1910
								611	0.190	1.1947
								614	0.170	1.1981
								617	0.140	1.2010
								620	0.120	1.2035
								623	0.100	1.2056
								626	0.080	1.2072
								631	0.070	1.2096
								636	0.050	1.2114
								641	0.040	1.2128
								646	0.030	1.2139
								651	0.020	1.2147
								701	0.020	1.2160
								711	0.010	1.2169
								721	0.010	1.2175
								741	0.0	1.2181
								801	0.0	1.2181
								831	0.0	1.2181
								901	0.0	1.2181
								1017	0.0	1.2181

NOTES: To convert runoff in CFS to IN/HR, multiply by .372833.



EVENT OF OCTOBER 30, 1969
BIESEL (WACO), TEXAS SW-11



RIESEL (WACO), TEXAS WATERSHED SW-12

LOCATION: McLennan Co., Texas; 18 mi. SE of Waco; Brazos River Basin.

AREA: 2.97 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													RIESEL (WACO), TEXAS		WATERSHED SW-12	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
1969	P	1.06	2.59	4.45	4.26	1.55	0.34	0.06	2.16	1.89	6.16	2.01	3.70	30.23		
	Q	0.0	0.918	2.915	1.619	0.237	0.0	0.0	0.0	0.0	0.008	0.0	0.758	6.455		
STA AV	P	2.13	2.68	2.23	4.01	3.93	3.73	1.50	2.09	2.58	2.72	2.92	2.32	32.84		
	Q	0.429	0.586	0.507	0.675	0.612	0.402	0.076	0.018	0.037	0.010	0.153	0.288	3.792		
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		2 Days		8 Days		
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	
1969		3-23	1.778	3-23	0.824	3-23	0.928	3-23	1.009	3-15	1.278	3-15	1.492	3-14	1.507	
														3-15	2.036	
MAXIMUMS FOR PERIOD OF RECORD																
		3-29	4.000	3-29	3.070	3-29	3.830	3-29	4.620	3-29	4.800	3-29	5.340	3-29	5.390	
		1965		1965		1965		1965		1965		1965		1965	4-19	
														1957	8.530	

NOTES: Watershed conditions: 100% native grass meadow mowed annually for hay. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 42.24-4. Precipitation and runoff records began Jan. 1, 1938; station not in operation July 1943 to June 1, 1947; part-year amounts not included in averages. Precipitation data obtained from rain gage 70. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969	DAILY PRECIPITATION (inches)												RIESEL (WACO), TEXAS WATERSHED SW-12	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.02	0.03E	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.20	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.18	0.0		
3	0.0	0.0	0.0	0.0	0.02E	0.34	0.0	0.0	0.06E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.40	0.04E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.37	0.07E	0.89	0.0	0.0	0.10E	0.0	0.08E	0.0	2.27		
6	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.60		
7	0.0	0.08E	0.20	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.78	0.0	0.0	0.0	0.0	0.0	1.25	0.0	0.0		
13	0.0	0.41	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.14	0.30	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.56	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.17	0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.39	0.0	0.05	0.0		
17	0.0	0.0	0.14	0.70	0.08E	0.0	0.0	0.0	0.0	0.0	0.33	0.0		
18	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.0		
19	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.17	0.0	0.06E	0.0	0.0	0.06E	0.0	0.53	0.0	0.0	0.0		
21	0.0	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.25	0.0	0.0	0.0	0.0	1.03	0.0	0.0	0.0	0.0		
23	0.0	0.0	1.07	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.07	0.0		
27	0.0	0.0	0.0	1.20	0.0	0.0	0.0	0.25	0.0	1.46	0.13	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.20	0.0	1.04	0.0	0.09E		
29	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.0	0.38	0.0	0.74		
30	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	1.95	0.0	0.0 S		
31	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.06	2.59	4.45	4.26	1.55	0.34	0.06	2.16	1.89	6.16	2.01	3.70		
STA AV	2.13	2.68	2.23	4.01	3.93	3.73	1.50	2.09	2.58	2.72	2.92	2.32		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage 70. Records began Jan. 1, 1938; station not in operation July 1943 to June 1, 1947; part-year amounts not included in averages. STA AV based on 27 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED SW-12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.022	0.0	0.029	0.0	0.0	0.0	0.0	0.0	0.0	0.037
6	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.054
7	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.124	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.048	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.001	0.182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.006	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.006	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.060	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.002	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.123	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.029	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.001
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0040	0.0115	0.0066	0.0009	0.0	0.0	0.0	0.0	0.0	0.0	0.0030
INCHES	0.0	0.918	2.915	1.619	0.237	0.0	0.0	0.0	0.0	0.008	0.0	0.758
STA AV	0.429	0.586	0.507	0.675	0.612	0.402	0.076	0.018	0.037	0.010	0.153	0.288

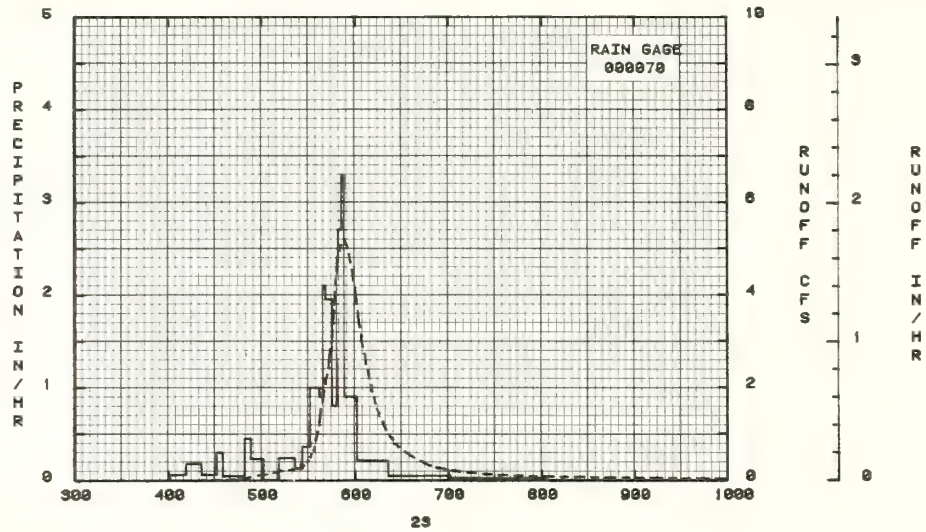
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 8.013973. Records began Jan. 1, 1938; station not in operation July 1943 to June 1, 1947; part-year amounts not included in averages. STA AV based on 27 yr period.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED SW-12								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969											
BG 000070			BG 000070								
3-23	0.0	0.0	3-23	401	0.0	0.0	3-23	300	0.0	0.0	
				411	0.0600	0.01		400	0.0	0.0	
				421	0.1800	0.04		408	0.0	0.0	
				431	0.0600	0.05		413	0.0	0.0	
				435	0.3000	0.07		418	0.0	0.0	
WATERSHED CONDITIONS: 100% native grass meadow, 6 inches high.				449	0.0429	0.08		423	0.010	0.0001	
				453	0.4500	0.11		428	0.010	0.0004	
				501	0.2250	0.14		433	0.010	0.0007	
				511	0.0	0.14		438	0.020	0.0011	
				521	0.2400	0.18		443	0.020	0.0017	
				526	0.1200	0.19		445	0.030	0.0020	
				531	0.3600	0.22		448	0.040	0.0026	
				537	1.0000	0.32		450	0.050	0.0031	
				539	0.9000	0.35		453	0.070	0.0041	
				541	2.1000	0.42		458	0.110	0.0067	
	545	1.9500	0.55		503	0.130	0.0101				
	548	0.8000	0.59		508	0.160	0.0142				
	549	2.3999	0.63		513	0.200	0.0193				
	551	2.7000	0.72		518	0.220	0.0253				
	553	3.2999	0.83		523	0.260	0.0322				
	557	0.9000	0.89		525	0.280	0.0353				
	601	0.9000	0.95		527	0.320	0.0387				
	621	0.2100	1.02		529	0.390	0.0427				
	701	0.0450	1.05		530	0.420	0.0450				
	801	0.0200	1.07		531	0.500	0.0476				
							532	0.570	0.0506		
							533	0.640	0.0540		
							534	0.720	0.0579		
							535	0.870	0.0624		
							536	1.040	0.0678		
							537	1.260	0.0743		
							538	1.530	0.0823		
							539	1.730	0.0916		
							540	1.940	0.1020		
							541	2.140	0.1136		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.333916.

1969	SELECTED RUNOFF EVENT					BIESSEL (WACO), TEXAS		WATERSHED SW-12			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MARCH 23 - 24, 1969 (CONTINUED)											
							3-23	542	2.280	0.1263	
								543	2.540	0.1400	
								544	2.820	0.1552	
								545	3.080	0.1722	
								546	3.510	0.1909	
								547	4.060	0.2124	
								548	4.540	0.2368	
								549	4.810	0.2637	
								550	4.980	0.2915	
								551	5.070	0.3200	
								553	5.200	0.3787	
								555	5.020	0.4367	
								557	4.690	0.4922	
								559	4.300	0.5432	
								600	4.070	0.5673	
								601	3.800	0.5896	
								602	3.530	0.6104	
								603	3.290	0.6298	
								604	3.020	0.6480	
								605	2.870	0.6647	
								606	2.720	0.6806	
								607	2.500	0.6954	
								608	2.360	0.7094	
								609	2.190	0.7223	
								610	2.040	0.7343	
								611	1.910	0.7455	
								612	1.780	0.7561	
								613	1.650	0.7658	
								614	1.540	0.7749	
								616	1.380	0.7916	
								618	1.210	0.8063	
								620	1.080	0.8194	
								622	0.950	0.8309	
								624	0.860	0.8413	
								626	0.780	0.8506	
								628	0.710	0.8591	
								633	0.580	0.8775	
								638	0.480	0.8926	
								643	0.390	0.9050	
								648	0.310	0.9150	
								653	0.260	0.9231	
								658	0.230	0.9301	
								703	0.200	0.9362	
								713	0.160	0.9465	
								723	0.130	0.9548	
								733	0.100	0.9613	
								743	0.050	0.9667	
								803	0.070	0.9758	
								823	0.060	0.9832	
								843	0.050	0.9895	
								913	0.040	0.9972	
								943	0.030	1.0032	
								1013	0.020	1.0075	
								1043	0.010	1.0101	
								1113	0.010	1.0118	
								1200	0.0	1.0131	
								1300	0.0	1.0131	
								1400	0.0	1.0131	
								1800	0.0	1.0131	
								2400	0.0	1.0131	
							3-24	1200	0.0	1.0131	
								1800	0.0	1.0131	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.333916.



EVENT OF MARCH 23 - 24, 1969
RIESEL (WACO), TEXAS WATERSHED SW-12

RIESEL (WACO), TEXAS WATERSHED SW-17

LOCATION: Falls Co., Texas; 19 mi. SE of Waco; Brazos River Basin.

AREA: 2.99 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED SW-17													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	1.03	2.56	4.07	4.31	1.47	0.34	0.03	2.87	1.68	6.39	1.83	3.77	30.35													
	Q	0.0	0.671	1.788	1.783	0.230	0.0	0.0	0.0	0.0	0.092	0.0	1.077	5.641													
STA AV	P	2.02	2.74	2.25	4.18	3.87	3.62	1.57	2.24	2.68	2.97	3.04	2.40	33.57													
	Q	0.418	0.620	0.604	0.999	0.852	0.779	0.188	0.074	0.184	0.169	0.485	0.504	5.875													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																			
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		3-23	0.789	3-23	0.501	3-23	0.642	4-12	0.857	4-12	0.983	12- 5	1.057	12- 4	1.077	3-15	1.439										
MAXIMUMS FOR PERIOD OF RECORD																											
		10-31	7.060	4-19	2.540	4-19	2.960	4-23	3.310	3-29	3.520	3-29	4.250	11-22	5.370	4-19	9.420										
		1940		1957		1957		1957		1965		1965		1940		1957											

NOTES: Watershed conditions: 100% Bermudagrass pasture. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 42.28-5. Precipitation and runoff record began Feb. 1, 1939; station not in operation July 1943 to Jan. 1, 1948; part-year amounts not included in averages. Precipitation data obtained from rain gage W-2. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches)													RIESEL (WACO), TEXAS WATERSHED SW-17	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.05	0.02E	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.15	0.0	0.52	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.17	0.0		
3	0.0	0.0	0.0	0.0	0.01E	0.34	0.0	0.0	0.06E	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.53	0.05E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0		
5	0.0	0.04E	0.37	0.06E	0.84	0.0	0.0	0.07E	0.0	0.05E	0.0	2.25		
6	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.62		
7	0.0	0.05E	0.18	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.75	0.0	0.0	0.0	0.0	0.0	1.31	0.0	0.0		
13	0.0	0.40	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.10	0.29	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0		
15	0.0	0.0	1.21	0.0	0.03E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0		
16	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.04	0.0		
17	0.0	0.0	0.19	0.69	0.07E	0.0	0.0	0.0	0.0	0.0	0.41	0.0		
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.0		
19	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.13	0.0	0.03E	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.27	0.0	0.0	0.0	0.0	1.48	0.0	0.0	0.0	0.0		
23	0.0	0.0	0.99	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.05	0.0		
27	0.0	0.0	0.0	1.19	0.0	0.0	0.0	0.37	0.0	1.45	0.15	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.25	0.0	1.03	0.0	0.10E		
29	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.38	0.0	0.80		
30	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	2.17	0.0	0.0 S		
31	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	1.03	2.56	4.07	4.31	1.47	0.34	0.03	2.87	1.68	6.39	1.83	3.77		
STA AV	2.02	2.74	2.25	4.18	3.87	3.62	1.57	2.24	2.68	2.97	3.04	2.40		

NOTES: For daily air temperatures in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage W-2. Records began Feb. 1, 1939; station not in operation July 1943 to Jan. 1, 1948; part-year amounts not included in averages. STA AV based on 25 yr period.

1969 MEAN DAILY DISCHARGE (cfs) RIESEL (WACO), TEXAS WATERSHED SW-17												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.004	0.0	0.029	0.0	0.0	0.0	0.0	0.0	0.0	0.076
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.060
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.054	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.107	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.004	0.034	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.031	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.098	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.055	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.012	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0030	0.0072	0.0075	0.0009	0.0	0.0	0.0	0.0	0.0004	0.0	0.0044
INCHES	0.0	0.671	1.788	1.783	0.230	0.0	0.0	0.0	0.0	0.092	0.0	1.077
STA AV	0.418	0.620	0.604	0.999	0.852	0.779	0.188	0.074	0.184	0.169	0.485	0.504

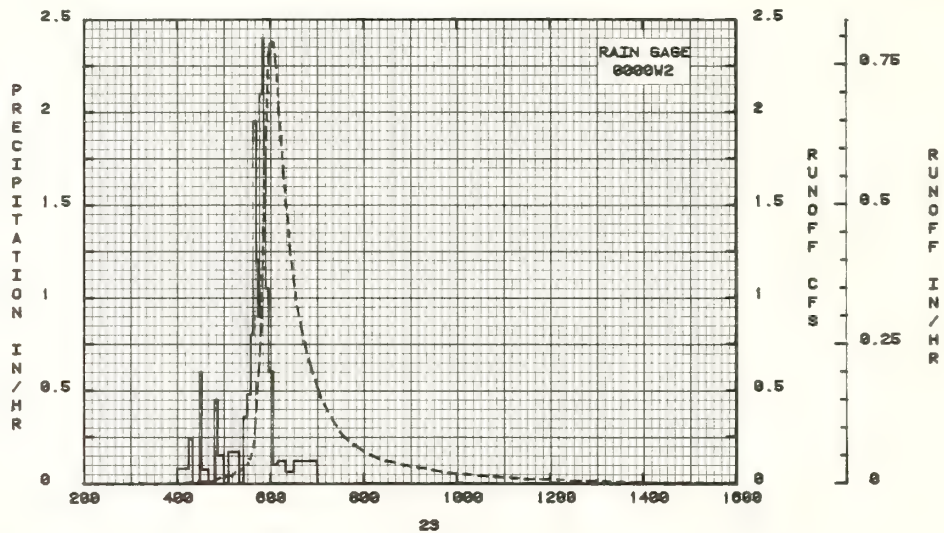
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 7.960368. Records began Feb. 1, 1939; station not in operation July 1943 to Jan. 1, 1948; part-year amounts not included in averages. STA AV based on 25 yr period.

1969 SELECTED RUNOFF EVENT RIESEL (WACO), TEXAS WATERSHED SW-17												
ANTECEDENT CONDITIONS				RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF MARCH 23, 1969												
RG 0000W2			RG 0000W2									
3-23	0.0	0.003	3-23	400	0.0	0.0	3-23	200	0.0	0.0		
				415	0.0800	0.02		400	0.0	0.0		
				420	0.2400	0.04		429	0.010	0.0008		
				429	0.0	0.04		431	0.010	0.0009		
				432	0.6000	0.07		433	0.010	0.0010		
WATERSHED CONDITIONS:				440	0.0750	0.08		448	0.010	0.0018		
100% Bermudagrass pasture,				448	0.0	0.08		450	0.020	0.0020		
6 inches high.				452	0.4500	0.11		455	0.030	0.0027		
				500	0.1500	0.13		500	0.030	0.0035		
				506	0.0	0.13		505	0.040	0.0045		
				520	0.1714	0.17		510	0.040	0.0056		
				525	0.0	0.17		515	0.060	0.0070		
				530	0.3600	0.20		520	0.070	0.0088		
				535	0.4800	0.24		525	0.080	0.0109		
				538	0.8000	0.28		530	0.100	0.0134		
				542	1.9500	0.41		532	0.110	0.0146		
				544	1.2000	0.45		534	0.130	0.0159		
				546	0.9000	0.48		536	0.160	0.0175		
				550	2.1000	0.62		538	0.200	0.0195		
				552	2.4000	0.70		539	0.230	0.0207		
				554	1.8000	0.76		540	0.290	0.0221		
				558	1.0500	0.83		541	0.350	0.0239		
				604	0.6000	0.89		542	0.410	0.0260		
				610	0.1000	0.90		543	0.490	0.0285		
				620	0.1200	0.92		544	0.540	0.0313		
				630	0.0600	0.93		545	0.600	0.0345		
				700	0.1200	0.99		546	0.650	0.0379		
								547	0.720	0.0417		
								548	0.820	0.0459		
								549	0.950	0.0508		
								550	1.120	0.0565		
								551	1.340	0.0633		
								552	1.520	0.0712		
								553	1.700	0.0802		
								555	1.920	0.1001		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.331682.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS			WATERSHED SW-17		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day
								Rate
								(cfs)
								Acc.
								(inches)
EVENT OF MARCH 23, 1969 (CONTINUED)								
				3-23			557	2.190
							558	2.300
							600	2.370
							603	2.380
							605	2.350
							608	2.240
							611	2.020
							614	1.860
							617	1.680
							620	1.520
							623	1.400
							626	1.230
							630	1.100
							635	0.940
							640	0.840
							645	0.740
							650	0.660
							655	0.590
							700	0.520
							705	0.460
							710	0.420
							720	0.340
							730	0.270
							740	0.230
							750	0.200
							800	0.170
							810	0.150
							820	0.130
							840	0.110
							900	0.090
							920	0.080
							940	0.060
							1000	0.050
							1030	0.040
							1100	0.030
							1130	0.020
							1200	0.020
							1230	0.010
							1300	0.010
							1400	0.0
							1500	0.0
							1800	0.0
							2400	0.0

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.331682.



EVENT OF MARCH 23, 1969
RIESEL (WACO), TEXAS WATERSHED SW-17

RIESEL (WACO), TEXAS WATERSHED Y-13

LOCATION: Falls County, Texas; 18 miles southeast of Waco; Brazos River Basin.

AREA: 11.30 acres

SLOPES: Slope-Percent 0-3
Percent of area 100.0

SOILS: Residual; deep, fine textured, granular, slowly permeable, alkaline throughout, slow internal drainage, Houston Black clay - 100%. This soil is noted for the formation of large extensive cracks upon drying.

EROSION: Erosion Class + 1 2 3 4 5
Percent of Area 0.0 0.0 100.0 0.0 0.0 0.0

LAND CAPABILITY: Class I II III IV V VI VII VIII
Percent of Area 0.0 100.0 0.0 0.0 0.0 0.0 0.0 0.0

GEOLOGY: The watershed is underlain by marls and chalks belonging to the Taylor group of the Gulf series of the Cretaceous system. The formations dip east-southeast at an angle a little steeper than the general slope of the land surface. For additional data see: Blank, H. E., et al., Geology of the Blacklands Experimental Watershed, near Waco, Texas, Bureau of Economic Geology, Univ. of Texas, Report No. 12, March, 1952.

SURFACE DRAINAGE: Good; drainage along individual furrows to a sodded waterway 500 ft. long.

CHARACTER OF FLOW: Ephemeral, continuous

INSTRUMENTATION: Runoff: 16-inch broad crested concrete V-notch weir with 5 to 1 side slopes. Weir has stilling well equipped with PW-1 water stage recorder. Precipitation: One weighing-recording rain gage.

WATERSHED CONDITIONS: Single crop each year with a 3 yr rotation of cotton, grain sorghum, small grain. Furrows between crop rows have a grade of 1 percent. Waterway is Coastal Bermuda grass sod. Vegetative cover: crop - 96 percent; waterway - 4 percent.

GENERALLY REPRESENTS: Areas in the Blackland Prairies and Coastal Plains of Texas with annual crops and improved management.

MONTHLY PRECIPITATION AND RUNOFF (inches)										RIESEL (WACO), TEXAS WATERSHED Y-13							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.82	2.53	4.17	4.22	1.44	0.33	0.08	1.80	1.74	6.24	1.96	3.87	29.20			
	Q	0.0	0.055	1.027	0.667	0.038	0.0	0.0	0.0	0.0	0.365	0.0	0.500	2.652			
STA AV	P	0.82	2.53	4.17	4.22	1.44	0.33	0.08	1.80	1.74	6.24	1.96	3.87	29.20			
	Q	0.0	0.055	1.027	0.667	0.038	0.0	0.0	0.0	0.0	0.365	0.0	0.500	2.652			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		10-30	0.435	10-30	0.290	10-30	0.349	10-30	0.365	4-12	0.394	12- 5	0.486	12- 5	0.500	3-15	0.891
MAXIMUMS FOR PERIOD OF RECORD																	
		10-30	0.435	10-30	0.290	10-30	0.349	10-30	0.365	4-12	0.394	12- 5	0.486	12- 5	0.500	3-15	0.891
		1969		1969		1969		1969		1969		1969		1969		1969	

NOTES: Watershed conditions: Same as described in previous section under WATERSHED CONDITIONS. Precipitation and runoff records began January 1, 1969. Precipitation data obtained from rain gage 70-A. For long time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches) EISEL (WACO), TEXAS WATERSHED Y-13												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.02E	0.0	0.0	0.09E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0
3	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.14	0.0	0.0	0.0
4	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0
5	0.0	0.03E	0.35	0.04E	0.95	0.0	0.0	0.08E	0.0	0.05E	0.0	2.21
6	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.66
7	0.0	0.09E	0.20	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0
12	0.0	0.0	0.0	1.75	0.0	0.0	0.0	0.0	0.0	1.37	0.0	0.0
13	0.0	0.42	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	1.08	0.30	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0
15	0.0	0.0	1.33	0.0	0.0 E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.02	0.0
17	0.0	0.0	0.15	0.70	0.06E	0.0	0.0	0.0	0.0	0.0 E	0.39	0.0
18	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.79	0.0
19	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.10E	0.0	0.03E	0.0	0.0	0.08E	0.0	0.51	0.0	0.0	0.0
21	0.0	0.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.27	0.0	0.0	0.0	0.0	0.86	0.0	0.0	0.0	0.0
23	0.0	0.0	1.03	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.07	0.0
27	0.0	0.0	0.0	1.20	0.0	0.0	0.0	0.24	0.0	1.37	0.12	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.14	0.0	0.98	0.0	0.18
29	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.35	0.0	0.82
30	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.12	0.0	0.0 S
31	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.82	2.53	4.17	4.22	1.44	0.33	0.08	1.80	1.74	6.24	1.96	3.87
STA AV	0.82	2.53	4.17	4.22	1.44	0.33	0.08	1.80	1.74	6.24	1.96	3.87

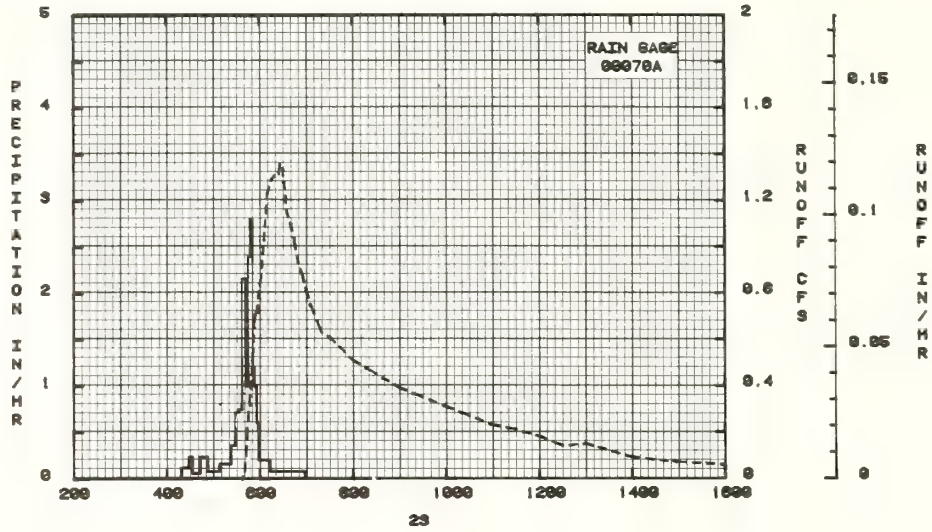
NOTES: For daily air temperature in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage 70-A. Records began January 1, 1969. STA AV based on 1 yr period.

1969 MEAN DAILY DISCHARGE (cfs) EISEL (WACO), TEXAS WATERSHED Y-13												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.001	0.0	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.052
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.186
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.193	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.027	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.007	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.152	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.062	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.050	0.061	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.173	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0009	0.0157	0.0106	0.0006	0.0	0.0	0.0	0.0	0.0056	0.0	0.0077
INCHES	0.0	0.055	1.027	0.667	0.038	0.0	0.0	0.0	0.0	0.365	0.0	0.500
STA AV	0.0	0.055	1.027	0.667	0.038	0.0	0.0	0.0	0.0	0.365	0.0	0.500

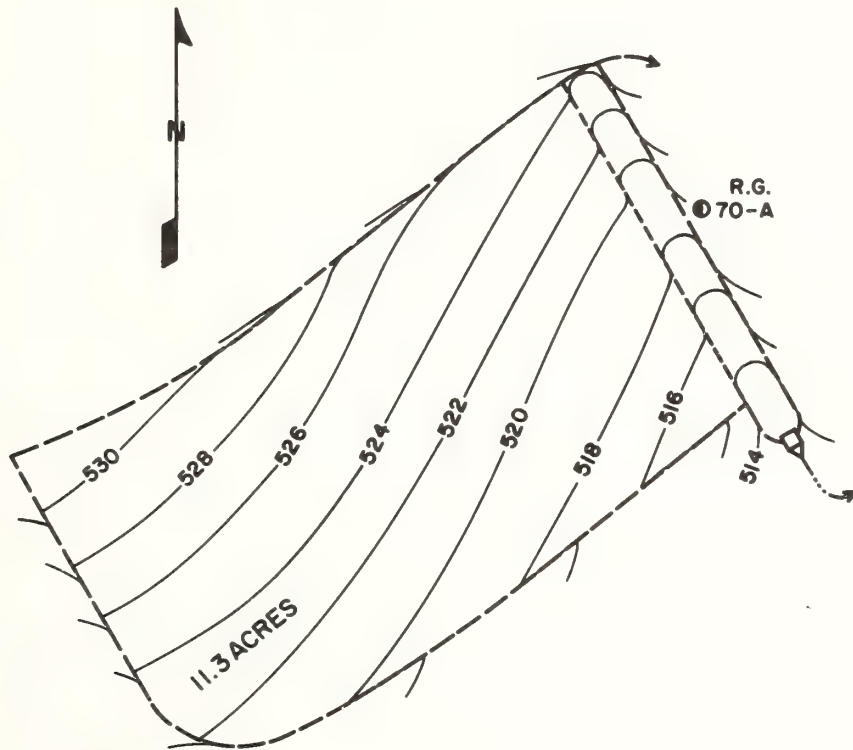
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 2.106341. Records began January 1, 1969. STA AV based on 1 yr period.

1969 SELECTED RUNOFF EVENT			RIESEL (WACO), TEXAS WATERSHED I-13							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23, 1969										
RG 00070A			RG 00070A							
3-23	0.03	0.0	3-23	418	0.0	0.0	3-23	536	0.0	0.0
				428	0.1200	0.02		537	0.0	0.0
				433	0.2400	0.04		538	0.010	0.0
				443	0.0600	0.05		539	0.010	0.0
				453	0.2400	0.09		540	0.030	0.0
WATERSHED CONDITIONS:				508	0.0800	0.11		541	0.070	0.0001
96% tilled, seed bed prepared				523	0.1600	0.15		542	0.100	0.0002
for cotton, not yet planted;				528	0.3600	0.18		543	0.140	0.0004
4% Bermudagrass waterway, good				533	0.7200	0.24		544	0.220	0.0007
cover.				537	0.7500	0.29		545	0.260	0.0011
				542	2.1600	0.47		547	0.330	0.0020
				545	1.0000	0.52		549	0.420	0.0031
				548	2.4000	0.64		551	0.530	0.0045
				551	2.8000	0.78		553	0.670	0.0063
				553	1.2000	0.82		555	0.720	0.0083
				556	1.0000	0.87		557	0.720	0.0104
				558	0.6000	0.89		559	0.810	0.0126
				613	0.2000	0.94		602	0.880	0.0163
				658	0.0800	1.00		605	1.000	0.0204
								610	1.230	0.0285
								615	1.290	0.0377
								620	1.310	0.0472
								625	1.320	0.0568
								627	1.360	0.0607
								630	1.340	0.0666
								635	1.160	0.0757
								640	1.100	0.0840
								645	1.020	0.0918
								650	0.930	0.0989
								655	0.880	0.1055
								700	0.810	0.1117
								710	0.710	0.1228
								720	0.630	0.1326
								730	0.610	0.1417
								800	0.510	0.1663
								830	0.450	0.1874
								900	0.390	0.2058
								930	0.350	0.2220
								1000	0.310	0.2365
								1030	0.270	0.2492
								1100	0.230	0.2602
								1130	0.210	0.2699
								1200	0.180	0.2785
								1230	0.140	0.2855
								1300	0.150	0.2919
								1400	0.090	0.3024
								1500	0.070	0.3094
								1600	0.060	0.3151
								1700	0.040	0.3195
								1800	0.040	0.3230
								2400	0.030	0.3414

NOTES: To convert runoff in CFS to IN/HR, multiply by .087764.



EVENT OF MARCH 23, 1969
 RIESEL (WACO), TEXAS WATERSHED Y-13



LEGEND

- WATERSHED BOUNDARY
- 530— CONTOUR
- ▭ GAGING STATION
- RECORDING RAIN GAGE



RIESEL, TEXAS
WATERSHED
Y-13

RIESEL (WACO), TEXAS WATERSHED Y-14

LOCATION: Falls County, Texas; 18 miles southeast of Waco; Brazos River Basin.

AREA: 5.60 acres

SLOPES: Slope-Percent 0-3
Percent of area 100.0

SOILS: Residual; deep, fine textured, granular, slowly permeable, alkaline throughout, slow internal drainage, Houston Black clay - 100%. This soil is noted for the formation of large extensive cracks upon drying.

EROSION: Erosion Class + 1 2 3 4 5
Percent of Area 0.0 0.0 100.0 0.0 0.0 0.0

LAND CAPABILITY: Class I II III IV V VI VII VIII
Percent of Area 0.0 100.0 0.0 0.0 0.0 0.0 0.0 0.0

GEOLOGY: The watershed is underlain by marls and chalks belonging to the Taylor group of the Gulf series of the Cretaceous system. The formations dip east-southeast at an angle a little steeper than the general slope of the land surface. For additional data see: Blank, H. E., et al., Geology of the Blacklands Experimental Watershed, near Waco, Texas, Bureau of Economic Geology, Univ. of Texas, Report No. 12, March, 1952.

SURFACE DRAINAGE: Good; drainage along individual furrows to a sodded waterway 400 ft. long.

CHARACTER OF FLOW: Ephemeral, continuous

INSTRUMENTATION: Runoff: 16-inch broad crested concrete V-notch weir with 5 to 1 side slopes. Weir has stilling well equipped with FW-1 water stage recorder. Precipitation: Two weighing-recording rain gage.

WATERSHED CONDITIONS: Single crop each year with a 3 yr rotation of cotton, grain sorghum, small grain. Furrows between crop rows have a grade of 1 percent. Waterway is a Coastal Bermudagrass sod. Vegetative cover: crop - 96 percent; waterway - 4 percent.

GENERALLY REPRESENTS: Areas in the Blackland Prairies and Coastal Plains of Texas with annual crops and improved management.

MONTHLY PRECIPITATION AND RUNOFF (inches)							RIESEL (WACO), TEXAS WATERSHED Y-14												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	1.02	2.50	4.11	4.35	1.53	0.33	0.05	2.48	1.54	6.37	1.91	3.54	29.73					
	Q	0.0	0.0	0.640	0.469	0.030	0.0	0.0	0.0	0.0	0.217	0.0	0.493	1.849					
STA AV	P	1.02	2.50	4.11	4.35	1.53	0.33	0.05	2.48	1.54	6.37	1.91	3.54	29.73					
	Q	0.0	0.0	0.640	0.469	0.030	0.0	0.0	0.0	0.0	0.217	0.0	0.493	1.849					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-23	0.623	3-23	0.266	3-23	0.296	4-12	0.348	4-12	0.375	12- 5	0.490	12- 5	0.493	3-15	0.595		
MAXIMUMS FOR PERIOD OF RECORD																			
		3-23	0.623	3-23	0.266	3-23	0.296	4-12	0.348	4-12	0.375	12- 5	0.490	12- 5	0.493	3-15	0.595		
		1969		1969		1969		1969		1969		1969		1969		1969			

NOTES: Watershed conditions: Same as described in previous section under WATERSHED CONDITIONS. Precipitation and runoff records began January 1, 1969. Precipitation data from Thiessen weighted method using rain gages 75-A and 89. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969	DAILY PRECIPITATION (inches)					RIESEL (WACO), TEXAS					WATERSHED Y-14		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.03	0.03E	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.17	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.11E	0.0	0.17	0.0	
3	0.0	0.0	0.0	0.0	0.07E	0.33	0.0	0.0	0.05E	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.48	0.04E	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	
5	0.0	0.03E	0.35	0.06E	0.85	0.0	0.0	0.07E	0.0	0.06E	0.0	2.20	
6	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.61	
7	0.0	0.07E	0.17	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	
12	0.0	0.0	0.0	1.76	0.0	0.0	0.0	0.0	0.0	1.32	0.0	0.0	
13	0.0	0.36	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	1.12	0.29	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.0	0.0	
15	0.0	0.0	1.32	0.0	0.01E	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	
16	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.0	0.04	0.0	
17	0.0	0.0	0.14	0.71	0.09E	0.0	0.0	0.0	0.0	0.0	0.36	0.0	
18	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.0	
19	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.14	0.0	0.04E	0.0	0.0	0.05E	0.0	0.18E	0.0	0.0	0.0	
21	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.30	0.0	0.0	0.0	0.0	
23	0.0	0.0	1.03	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09E	0.0	0.0	0.06	0.0	
27	0.0	0.0	0.0	1.23	0.0	0.0	0.0	0.22	0.0	1.32	0.14	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.32	0.0	1.07	0.0	0.09E	
29	0.13E	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.39	0.0	0.64	
30	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	2.20	0.0	0.0 S	
31	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	1.02	2.50	4.11	4.35	1.53	0.33	0.05	2.48	1.54	6.37	1.91	3.54	
STA AV	1.02	2.50	4.11	4.35	1.53	0.33	0.05	2.48	1.54	6.37	1.91	3.54	

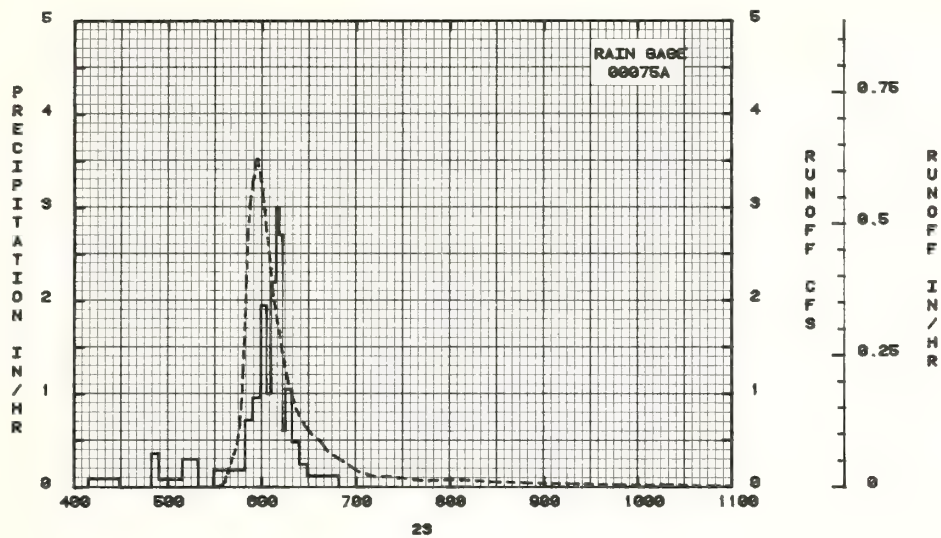
NOTES: For daily air temperature in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are Thiessen weighted average of rain gages 75-A and 89. Records began January 1, 1969. STA AV based on 1 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					RIESEL (WACO), TEXAS					WATERSHED Y-14		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.034	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.082	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.089	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.004	0.015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.076	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.051	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MEAN	0.0	0.0	0.0049	0.0037	0.0002	0.0	0.0	0.0	0.0	0.0016	0.0	0.0037	
INCHES	0.0	0.0	0.640	0.469	0.030	0.0	0.0	0.0	0.0	0.217	0.0	0.493	
STA AV	0.0	0.0	0.640	0.469	0.030	0.0	0.0	0.0	0.0	0.217	0.0	0.493	

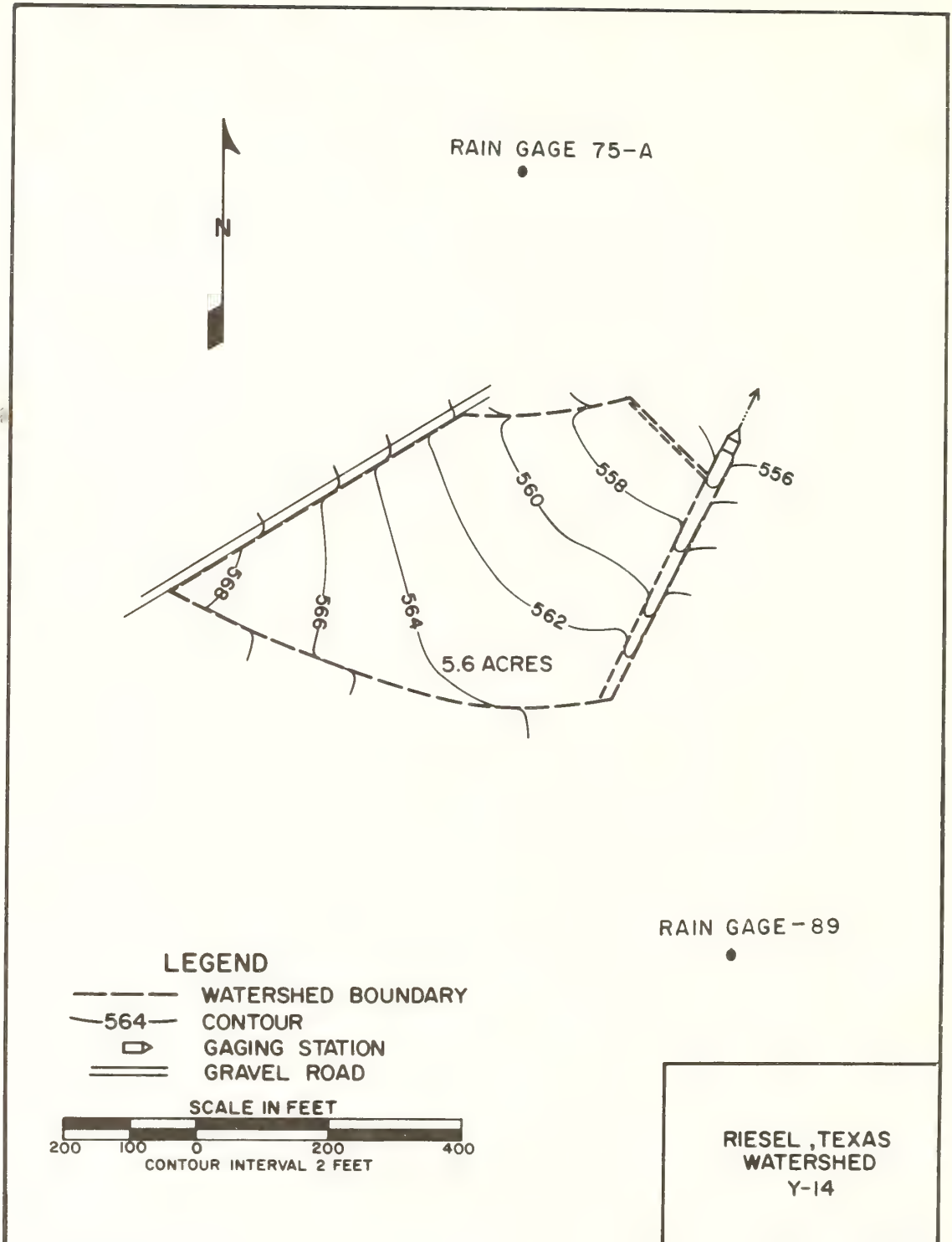
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 4.250295. Records began January 1, 1969. STA AV based on 1 yr period.

1969 SELECTED RUNOFF EVENT			BIESZL (WACO), TEXAS				WATERSHED Y-14			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MARCH 23, 1969										
RG 00075A			RG 00075A							
3-23	0.0	0.0	3-23	409	0.0	0.0	3-23	530	0.0	0.0
				429	0.0900	0.03		531	0.0	0.0
				449	0.0	0.03		532	0.0	0.0
				454	0.3600	0.06		533	0.010	0.0
				509	0.0800	0.08		534	0.020	0.0
WATERSHED CONDITIONS: 96% tilled, seed bed prepared for grain sorghum, not yet planted; 4% Bermudagrass waterway, good cover.				519	0.3000	0.13		535	0.030	0.0001
				529	0.0	0.13		536	0.050	0.0002
				539	0.1800	0.16		537	0.110	0.0004
				549	0.1800	0.19		538	0.150	0.0008
				554	0.7200	0.25		539	0.200	0.0013
				559	0.9600	0.33		540	0.260	0.0020
				603	1.9500	0.46		541	0.310	0.0028
				606	1.0000	0.51		542	0.350	0.0038
				609	2.2000	0.62		543	0.400	0.0049
				611	3.0001	0.72		544	0.460	0.0062
				613	2.6999	0.81		545	0.560	0.0077
				615	0.6000	0.83		546	0.760	0.0056
				619	1.0500	0.90		547	0.950	0.0121
				624	0.4800	0.94		548	1.310	0.0154
				629	0.2400	0.96		549	1.760	0.0200
				649	0.1200	1.00		550	2.270	0.0259
								551	2.690	0.0332
								552	3.010	0.0416
								553	3.120	0.0507
								554	3.260	0.0601
								555	3.340	0.0698
								556	3.490	0.0798
								557	3.520	0.0903
								559	3.350	0.1105
								601	3.060	0.1295
								603	2.740	0.1466
								605	2.420	0.1619
								607	2.060	0.1751
								610	1.750	0.1920
								613	1.440	0.2061
								616	1.180	0.2177
								619	0.980	0.2273
								622	0.830	0.2353
								627	0.660	0.2463
								632	0.560	0.2553
								637	0.490	0.2630
								642	0.380	0.2694
								647	0.320	0.2746
								652	0.270	0.2789
								702	0.160	0.2852
								712	0.110	0.2892
								722	0.110	0.2924
								732	0.090	0.2954
								742	0.070	0.2978
								752	0.070	0.2999
								802	0.080	0.3021
								812	0.070	0.3043
								832	0.050	0.3078
								852	0.040	0.3105
								922	0.030	0.3136
								952	0.020	0.3158
								1022	0.020	0.3176
								1052	0.010	0.3189
								1122	0.010	0.3198
								1152	0.010	0.3207
								1252	0.0	0.3216
								1352	0.0	0.3216
								1452	0.0	0.3216
								1552	0.0	0.3216
								1652	0.0	0.3216
								1800	0.0	0.3216

NOTES: To convert runoff in CFS to IN/HR, multiply by .177096.



EVENT OF MARCH 23, 1969
RIESEL (WACO), TEXAS WATERSHED Y-14



RIESEL (WACO), TEXAS WATERSHED W-12

LOCATION: Falls County, Texas; 18 miles southeast of Waco; Brazos River Basin.

AREA: 9.90 acres

SLOPES: Slope-Percent 0-3
Percent of area 100.0

SOILS: Residual; deep, fine textured, granular, slowly permeable, alkaline throughout, slow internal drainage, Houston Black clay - 90%, Houston Black clay shallow phase - 10%. These soils are noted for the formation of large extensive cracks upon drying.

EROSION: Erosion Class + 1 2 3 4 5
Percent of Area 0.0 0.0 100.0 0.0 0.0 0.0

LAND CAPABILITY: Class I II III IV V VI VII VIII
Percent of Area 0.0 100.0 0.0 0.0 0.0 0.0 0.0 0.0

GEOLOGY: The watershed is underlain by marls and chalks belonging to the Taylor group of the Gulf series of the Cretaceous system. The formations dip east-southeast at an angle a little steeper than the general slope of the land surface. For additional data see: Blank, E. E., et al., Geology of the Blacklands Experimental Watershed, near Waco, Texas, Bureau of Economic Geology, Univ. of Texas, Report No. 12, March, 1952.

SURFACE DRAINAGE: Good; drainage along individual furrows to a sodded waterway 450 ft. long.

CHARACTER OF FLOW: Ephemeral, continuous

INSTRUMENTATION: Runoff: 16-inch broad crested concrete V-notch weir with 5 to 1 side slopes. Weir has stilling well equipped with FW-1 water stage recorder. Precipitation: One weighing-recording rain gage.

WATERSHED CONDITIONS: Single crop each year with a 3-yr rotation of cotton, grain sorghum, small grain. Furrows between crop rows have a grade of 1 percent. Waterway is a Coastal Bermuda grass sod. Vegetative cover: crop - 97 percent; waterway - 3 percent.

GENERALLY REPRESENTS: Areas in the Blackland Prairies and Coastal Plains of Texas with annual crops and improved management.

MONTHLY PRECIPITATION AND RUNOFF (inches)							RIESEL (WACO), TEXAS WATERSHED W-12										
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.41	1.94	3.63	11.98			
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.223	0.005	0.456	0.684			
STA AV	P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.41	1.94	3.63	11.98			
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.223	0.005	0.456	0.684			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		12- 6	0.153	12- 6	0.116	12- 6	0.172	12- 6	0.255	12- 6	0.287	12- 5	0.350	12- 5	0.424	12- 3	0.431
MAXIMUMS FOR PERIOD OF RECORD																	
		12- 6	0.153	12- 6	0.116	12- 6	0.172	12- 6	0.255	12- 6	0.287	12- 5	0.350	12- 5	0.424	12- 3	0.431
		1969		1969		1969		1969		1969		1969		1969		1969	

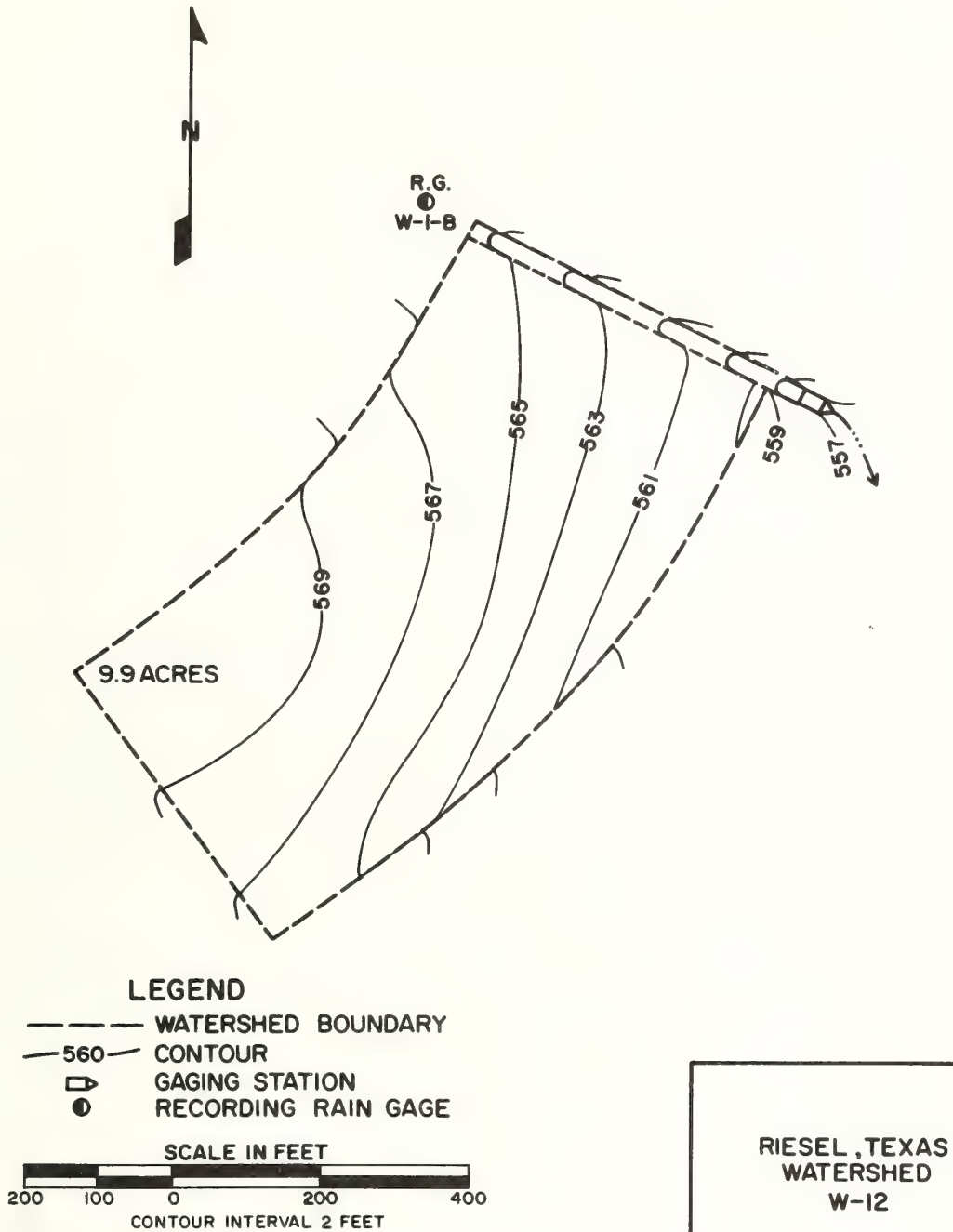
NOTES: Watershed conditions: Same as described in previous section under WATERSHED CONDITIONS. Precipitation and runoff records began October 1, 1969. Precipitation data obtained from rain gage W-1B. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969 DAILY PRECIPITATION (inches) BIESEL (WACO), TEXAS WATERSHED W-12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.15
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.37	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.41	0.14	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.01	0.0	0.17
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.75
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.23	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.41	1.94	3.63
STA AV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.41	1.94	3.63

NOTES: For daily air temperature in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage W-1B. Records began October 1, 1969. STA AV based on 1 yr period.

1969 MEAN DAILY DISCHARGE (cfs) BIESEL (WACO), TEXAS WATERSHED W-12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.029
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.138
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.012
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.007
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.058	0.0	0.003
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0030	0.0001	0.0061
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.223	0.005	0.456
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.223	0.005	0.456

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 2.404207. STA AV based on 1 yr period.



RIESEL (WACO), TEXAS WATERSHED W-13

LOCATION: Falls County, Texas; 18 miles southeast of Waco; Brazos River Basin.

AREA: 11.30 acres

SLOPES: Slope-Percent 0-3
Percent of area 100.0

SOILS: Residual; deep, fine textured, granular, slowly permeable, alkaline throughout, slow internal drainage, Houston Black clay - 100%. This soil is noted for the formation of large extensive cracks upon drying.

EROSION: Erosion Class + 1 2 3 4 5
Percent of Area 0.0 0.0 100.0 0.0 0.0 0.0

LAND CAPABILITY: Class I II III IV V VI VII VIII
Percent of Area 0.0 100.0 0.0 0.0 0.0 0.0 0.0 0.0

GEOLOGY: The watershed is underlain by marls and chalks belonging to the Taylor group of the Gulf series of the Cretaceous system. The formations dip east-southeast at an angle a little steeper than the general slope of the land surface. For additional data see: Blank, R. E., et al., Geology of the Blacklands Experimental Watershed, near Waco, Texas, Bureau of Economic Geology, Univ. of Texas, Report No. 12, March, 1952.

SURFACE DRAINAGE: Good; drainage along individual furrows to a sodded waterway 450 ft. long.

CHARACTER OF FLOW: Ephemeral, continuous

INSTRUMENTATION: Runoff: 16-inch broad crested concrete V-notch weir with 5 to 1 side slopes. Weir has stilling well equipped with FW-1 water stage recorder. Precipitation: One weighing-recording rain gage.

WATERSHED CONDITIONS: Single crop each year with a 3 yr rotation of cotton, grain sorghum, small grain. Furrows between crop rows have a grade on 1 percent. Waterway is a Coastal Bermudagrass sod. Vegetative cover: crop - 97 percent; waterway - 3 percent.

GENERALLY REPRESENTS: Areas in the Blackland Prairies and Coastal Plains of Texas with annual crops and improved management.

MONTHLY PRECIPITATION AND RUNOFF (inches)														RIESEL (WACO), TEXAS WATERSHED W-13															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.41	1.94	3.63	11.98															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.163	0.005	0.153	0.321															
STA AV	P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.41	1.94	3.63	11.98															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.163	0.005	0.153	0.321															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge				1 Hour		2 Hours		Maximum Volume for Selected Time Interval										8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		10-30	0.115	10-30	0.072	10-30	0.096	10-30	0.121	10-29	0.121	12- 5	0.129	10-28	0.157	10-23	0.163												
MAXIMUMS FOR PERIOD OF RECORD																													
		10-30	0.115	10-30	0.072	10-30	0.096	10-30	0.121	10-29	0.121	12- 5	0.129	10-28	0.157	10-23	0.163												
		1969		1969		1969		1969		1969		1969		1969		1969													

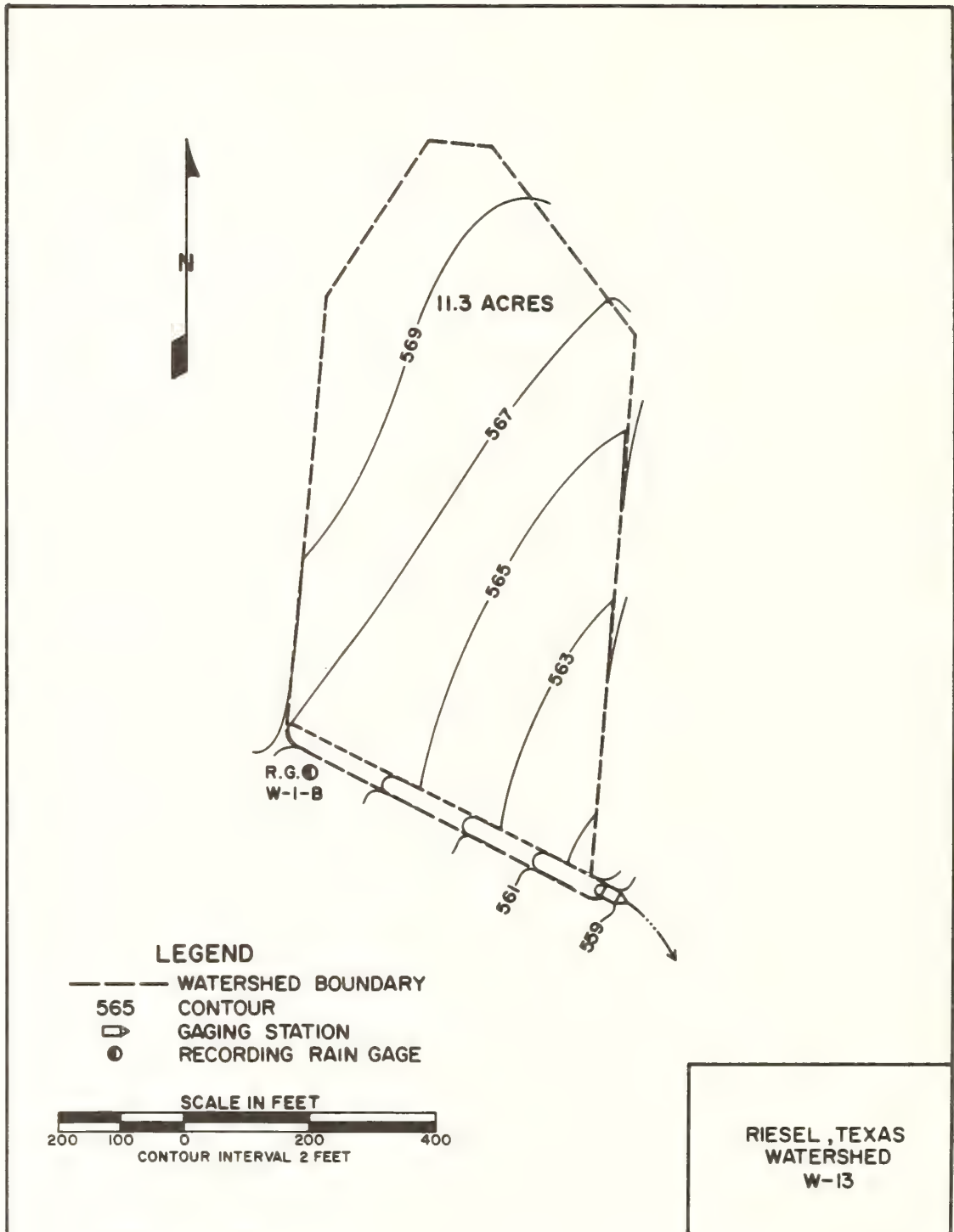
NOTES: Watershed conditions: Same as described in previous section under WATERSHED CONDITIONS. Precipitation and runoff records began October 1, 1969. Precipitation data obtained from rain gage W-1B. For long-time precipitation records, see U.S. Weather Bureau records at Waco, Texas.

1969	DAILY PRECIPITATION (inches)					RIESEL (WACO), TEXAS WATERSHED W-13							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.15	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.37	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.41	0.14	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.01	0.0	0.17	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.75	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.23	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.41	1.94	3.63	
STA AV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.41	1.94	3.63	

NOTES: For daily air temperature in the vicinity, see table for Watershed C, p. 42.002-1. Precipitation values are from rain gage W-1B. Records began October 1, 1969. STA AV based on 1 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					RIESEL (WACO), TEXAS WATERSHED W-13							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.031	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.032	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.013	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.0	0.005	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.057	0.0	0.004	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0025	0.0001	0.0023	
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.163	0.005	0.153	
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.163	0.005	0.153	

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 2.106341. STA AV based on 1 yr period.



OXFORD, MISSISSIPPI WATERSHED W-4C

LOCATION: Marshall Co., Miss.; 4.8 mi. SE of Holly Springs, on State Highway No. 4; Chews Creek, Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 1580.00 acres 2.47 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)							OXFORD, MISSISSIPPI WATERSHED W-4C								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	4.50	4.71	2.57	8.52	3.21	3.75	2.97	7.93	3.55	1.96	5.33	8.97	57.97	
	Q	0.656	1.846	0.113	2.330	0.028	0.024	0.162	0.751	0.424	0.0	0.515	2.130	8.978	
STA AV	P	3.83	4.73	4.72	4.85	3.99	3.00	3.90	3.72	4.89	2.40	4.41	5.37	49.81	
	Q	0.648	0.975	0.857	0.694	0.281	0.092	0.216	0.241	0.369	0.114	0.512	0.770	5.768	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		4- 9	0.405	4- 9	0.333	4- 9	0.495	2- 1	0.774	2- 1	1.186	2- 1	1.375	12-28	1.727
MAXIMUMS FOR PERIOD OF RECORD															
		2-23	0.840	2-23	0.720	2-23	1.130	3- 4	1.560	3- 4	1.620	1-31	2.380	1-30	3.340
		1962		1962		1962		1964		1964		1957		1957	

NOTES: Watershed conditions: About 13% in cultivation (cotton), fair cover November to March, poor cover April and May improving to good by mid-July; 40% in pasture and idle land, good cover April to October with fair cover remainder of year; 46% in woods, good cover; 1% bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1970. Reported as Watershed W-4 prior to 1965 and from 1965-68 as Watershed W-4A and redesignated as Watershed W-4C (1969). Gaging station relocated upstream, Jan. 1965, reducing drainage area from 2,000 to 1,580 acres. About 30% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.1-4. Monthly precipitation Thiessen weighted from rain gages 7, 8 and 18. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4N, Mississippi.

1969 DAILY AIR TEMPERATURE (degrees F)													OXFORD, MISSISSIPPI WATERSHED W-4C	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min		
1	32 13	47 39	45 34	55 33	70 37	88 68	99 71	89 62	84 67	84 51	56 49	53 19		
2	35 18	53 42	48 29	79 48	79 46	84 59	94 69	92 62	86 64	63 57	60 32	60 23		
3	43 25	59 33	52 29	75 56	80 53	75 44	93 64	92 60	87 65	80 57	57 37	56 23		
4	39 13	45 24	44 26	80 57	78 56	79 45	94 64	84 56	80 67	87 59	55 32	48 26		
5	25 10	57 36	50 26	79 60	80 59	78 51	95 68	85 56	86 68	88 58	54 25	43 24		
6	39 17	49 45	48 31	72 50	83 62	84 52	95 73	87 58	87 69	82 63	61 25	41 32		
7	48 32	63 34	40 29	66 40	80 60	90 59	92 74	90 59	91 69	68 63	73 33	50 37		
8	43 29	65 56	53 28	78 46	80 62	91 63	95 72	93 61	85 70	76 43	67 50	41 26		
9	69 36	61 37	62 27	79 59	76 46	92 67	98 72	95 67	83 59	79 43	74 31	47 26		
10	38 19	41 25	43 21	74 58	70 43	91 65	97 74	97 68	76 51	79 43	67 30	48 29		
11	31 18	53 30	25 20	75 48	82 37	84 66	99 74	85 57	73 48	83 67	70 32	57 36		
12	39 21	58 35	43 21	71 48	70 46	90 70	100 75	86 57	75 48	84 70	66 48	46 25		
13	48 33	41 21	45 21	75 56	72 51	84 68	97 75	85 57	81 55	85 70	63 44	50 27		
14	52 29	46 33	50 21	68 59	83 55	92 69	98 71	90 60	81 56	87 43	62 28	63 34		
15	52 29	47 36	54 25	74 58	82 54	89 60	96 71	89 63	83 58	56 36	33 19	57 29		
16	61 39	38 29	48 33	79 54	82 55	73 59	96 72	89 63	84 60	64 40	51 22	52 26		
17	56 43	33 30	63 32	84 57	73 63	75 52	94 64	88 67	86 62	66 45	66 38	48 23		
18	59 53	37 24	70 35	70 61	70 65	82 52	90 70	91 70	88 65	68 40	57 48	54 23		
19	60 38	46 21	60 38	66 48	79 60	85 60	80 71	77 73	80 65	71 41	59 31	62 33		
20	47 34	51 30	76 41	50 38	75 55	89 60	90 66	90 71	81 65	82 48	42 25	48 22		
21	46 34	55 40	70 37	69 39	81 57	85 64	93 67	91 66	77 66	82 55	58 32	44 20		
22	49 42	59 43	62 30	76 44	86 59	90 63	95 68	85 68	79 63	75 40	65 35	42 32		
23	58 47	48 40	69 37	73 39	90 59	90 66	95 72	78 66	74 63	67 38	64 35	45 33		
24	70 31	47 29	60 48	64 34	86 64	90 69	89 69	82 61	76 65	60 38	68 45	51 22		
25	38 21	51 32	55 42	65 37	82 63	89 70	91 66	85 61	73 46	63 39	68 42	41 23		
26	37 22	53 35	44 32	75 40	78 57	90 74	84 66	86 61	78 47	74 54	69 35	37 28		
27	36 26	54 42	45 25	80 56	81 57	91 76	89 72	86 61	81 46	73 50	63 35	48 27		
28	50 34	67 43	57 29	79 58	85 62	93 73	87 68	87 61	85 50	60 33	55 31	50 29		
29	55 46		71 37	68 43	86 62	97 72	87 62	90 61	78 45	58 33	43 17	51 43		
30	65 53		56 31	63 37	88 62	98 72	85 58	86 59	82 44	65 39	50 17	58 34		
31	64 39		52 33		89 62		88 59	87 59		69 52		35 30		
AV.	48 30	51 34	54 31	72 49	80 56	87 63	93 69	88 62	81 59	73 49	60 33	49 28		
MEAN	39.2	42.7	42.1	60.4	67.9	75.0	80.9	75.0	70.1	61.1	46.7	38.6		
STA AV	47 28	52 31	60 37	72 50	80 58	86 64	89 68	89 67	82 60	73 48	62 38	50 30		

NOTES: Temperature data from U.S. Weather Bureau Station at Holly Springs 4N, Mississippi. STA AV based on 13 yr (1957-69) record period.

1969	DAILY PRECIPITATION (inches)					OXFORD, MISSISSIPPI					WATERSHED W-4C		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	2.10	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.31	0.0	0.0	
2	0.0	0.43	0.0	0.0	0.0	0.31	0.33	0.34	0.04	0.0	0.0	0.0	
3	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	
4	0.0	0.0	0.0	2.05	0.0	0.0	0.0	0.0	2.18	0.0	0.0	0.0	
5	0.0	0.10	0.0	0.30	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	
6	0.0	0.59	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	1.82	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.35	0.0	0.14	
8	0.03	0.05	0.09	0.0	0.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	2.79	0.0	0.52	0.0	0.03	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.22	0.0	0.81	0.0	0.44	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.09	1.03	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	1.54	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	
14	0.0	0.20	0.0	0.0	0.59	0.46	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0	0.0	
17	0.53	0.0	0.0	1.31	0.47	0.0	0.0	0.0	0.0	0.0	0.76	0.0	
18	0.70	0.0	0.48	0.19	0.01	0.0	0.02	3.73	0.0	0.0	3.53	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.21	0.00	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.12	0.0	1.81	0.0	0.0	0.0	0.0	
21	0.06	0.14	0.0	0.0	0.0	0.48	0.85	0.45	0.0	0.0	0.0	1.08	
22	0.08	0.35	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	
23	0.07	0.0	1.51	0.0	0.0	0.15	1.26	0.0	0.01	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.73	0.36	0.0	0.0	0.05	0.0	0.0	0.00	
25	0.0	0.0	0.0	0.0	0.77	0.0	0.0	0.0	0.0	0.0	0.0	1.02	
26	0.16	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.04	0.0	0.0	
27	0.56	0.0	0.0	0.11	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	
28	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.36	
29	0.0	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.05	
30	1.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	
31	0.48	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	1.11	0.0	0.0	
TOTAL	4.50	4.71	2.57	8.52	3.21	3.75	2.97	7.93	3.55	1.96	5.33	8.97	
STA AV	3.83	4.73	4.72	4.85	3.99	3.00	3.90	3.72	4.89	2.40	4.41	5.37	

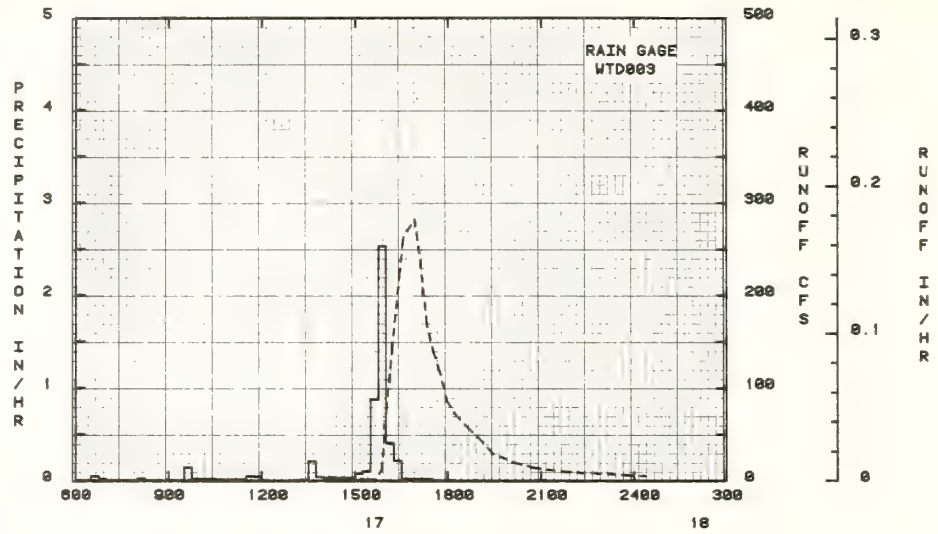
NOTES: Daily precipitation values Thiessen weighted from rain gages 7, 8 and 18. STA AV based on for 13 yr (1957-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					OXFORD, MISSISSIPPI					WATERSHED W-4C		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.290	50.806	0.211	0.0	0.145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.211	52.275	0.211	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.301	2.814	0.132	0.0	0.0	0.0	0.0	0.0	1.449	0.0	0.0	0.0	
4	0.144	0.579	0.132	13.042	0.0	0.0	0.0	0.0	22.447	0.0	0.0	0.0	
5	0.290	0.235	0.211	8.160	0.0	0.0	0.0	0.0	4.092	0.0	0.0	0.0	
6	0.380	4.361	0.211	0.574	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.070	
7	0.380	0.791	0.211	0.301	0.0	0.0	0.0	0.0	0.147	0.0	0.0	1.064	
8	0.145	0.574	0.380	0.211	0.141	0.0	0.0	0.0	0.0	0.0	0.0	0.039	
9	0.0	0.574	0.235	49.730	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.677	0.0	28.720	0.0	0.913	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.574	0.0	1.320	0.0	0.0	0.0	0.0	0.0	0.0	0.024	0.0	
12	0.0	0.471	0.0	0.688	0.0	0.0	0.0	0.0	0.0	0.0	0.019	0.0	
13	0.0	0.471	0.0	15.146	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.471	0.0	3.512	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	1.621	0.0	1.032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.688	0.0	0.688	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.531	0.380	0.0	21.906	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	1.870	0.380	0.0	2.308	0.0	0.0	0.0	18.418	0.0	0.0	31.078	0.0	
19	0.235	0.471	0.0	1.056	0.0	0.188	0.0	0.684	0.0	0.0	3.084	0.0	
20	0.0	0.380	0.0	0.677	0.0	0.0	0.0	30.172	0.0	0.0	0.0	0.0	
21	0.0	0.380	0.0	0.677	0.0	0.0	5.815	0.606	0.0	0.0	0.0	2.817	
22	0.0	0.380	0.0	0.677	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.069	
23	0.0	0.290	4.559	0.677	0.0	0.011	4.519	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.380	0.884	0.677	0.0	0.452	0.403	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.471	0.098	0.574	1.512	0.0	0.0	0.0	0.0	0.0	0.0	7.729	
26	0.0	0.471	0.0	0.380	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.688	
27	1.312	0.380	0.0	0.483	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.235	
28	0.991	0.211	0.0	0.574	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.789	
29	0.066	0.0	0.0	0.471	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.480	
30	31.778	0.0	0.0	0.380	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.247	
31	4.592	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.193	
MEAN	1.4038	4.3771	0.2411	5.1547	0.0592	0.0522	0.3470	1.6090	0.9378	0.0	1.1402	4.5619	
INCHES	0.656	1.846	0.113	2.330	0.028	0.024	0.162	0.751	0.424	0.0	0.515	2.130	
STA AV	0.648	0.975	0.857	0.694	0.281	0.092	0.216	0.241	0.369	0.114	0.512	0.770	

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.01506. STA AV based on 13 yr (1957-69) record period. Quality of records: Good, estimated to be within 10% of actual.

1969 SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI			WATERSHED #4C		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day
							Rate	Acc.
							(cfs)	(inches)
EVENT OF APRIL 17 - 18, 1969								
4-17	RG WTD003 0.01	0.007	4-17	RG WTD003				
				630	0.0	0.0	4-17	1400
				645	0.0480	0.01		1406
				700	0.0160	0.02		1412
				715	0.0040	0.02		1416
				730	0.0040	0.02		1430
				745	0.0040	0.02		1444
				800	0.0040	0.02		1514
				815	0.0234	0.03		1540
				830	0.0047	0.03		1552
				930	0.0	0.03		1602
				945	0.1440	0.06		1612
				1000	0.0157	0.07		1626
				1015	0.0157	0.07		1634
				1030	0.0157	0.07		1656
				1045	0.0115	0.08		1708
				1100	0.0120	0.08		1720
				1115	0.0120	0.08		1732
				1130	0.0120	0.09		1746
				1145	0.0480	0.10		1758
				1200	0.0440	0.11		1814
				1300	0.0	0.11		1836
				1315	0.0040	0.11		1858
				1330	0.0120	0.11		1928
				1345	0.2080	0.17		2008
				1400	0.0400	0.18		2046
				1415	0.0231	0.18		2144
				1430	0.0231	0.19		2256
				1445	0.0320	0.20		2400
				1500	0.0320	0.20	4-18	22
				1515	0.0760	0.22		5.460
				1530	0.1040	0.25		
				1545	0.8763	0.47		
				1600	2.5280	1.10		
				1615	0.4046	1.20		
				1630	0.2114	1.25		
				1645	0.0200	1.26		
				1700	0.0200	1.26		
				1715	0.0160	1.27		
				1730	0.0160	1.27		
				1745	0.0	1.27		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000628. Thiessen weighted storm rainfall, rain gages 7, 8 and 18. For 30-day antecedent P and Q, see tables on previous page.



EVENT OF APRIL 17 - 18, 1969
OXFORD, MISSISSIPPI WATERSHED W-4C

OXFORD, MISSISSIPPI WATERSHED W-5

LOCATION: Marshall Co., Miss.; 6.1 mi. SW of Holly Springs, on State Highway No. 4; Willie Wilkins Creek, Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 1130.00 acres 1.76 sq. miles (before Oct. 1)
1000.00 acres 1.56 sq. miles (after Sept. 30)

MONTHLY PRECIPITATION AND RUNOFF (inches)														OXFORD, MISSISSIPPI		WATERSHED W-5	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	4.44	4.71	2.52	9.01	3.25	3.80	2.65	7.97	3.69	1.82	5.84	9.03	58.74			
	Q	1.778	3.086	0.486	4.697	0.154	0.069	0.004	0.919	0.762	0.0	1.222	5.204	18.381			
STA AV	P	3.90	4.72	4.87	4.93	4.14	3.03	3.85	4.08	4.80	2.33	4.48	5.45	50.58			
	Q	1.406	1.843	1.797	1.430	0.701	0.264	0.330	0.452	0.580	0.230	.894	1.805	11.730			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		4- 9	0.541	4- 9	0.474	4- 9	0.721	2- 1	1.211	2- 1	1.751	12-28	2.528	12-28	3.278	1-30	4.285
MAXIMUMS FOR PERIOD OF RECORD																	
		3- 4	1.190	3- 4	0.990	3- 4	1.630	3- 4	2.120	2- 9	2.800	2- 9	3.100	1-30	3.720	1-27	5.250
		1964		1964		1964		1964		1966		1966		1957		1957	

NOTES: Watershed conditions: About 23% in cultivation (cotton, ryegrass and corn), fair cover November to March, poor cover April and May improving to good by mid-July; 51% in pasture and idle land, good cover April to October with fair cover remainder of year; 25% in woods, good cover; 1% bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1970. About 29% of drainage area above small desilting and retention dams. For map of watershed, see Selected Runoff Events for Small Agricultural Watersheds in the United States, ARS, SWC, January 1960, p. 62.2-3. Monthly precipitation Thiessen weighted from rain gages 8 and 33. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4W, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-5	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	2.17	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.25	0.0	0.0		
2	0.0	0.46	0.0	0.0	0.0	0.31	0.39	0.10	0.19	0.0	0.0	0.0		
3	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04	0.0	0.0	0.0		
4	0.0	0.0	0.0	2.22	0.0	0.0	0.0	0.0	1.94	0.0	0.0	0.0		
5	0.0	0.09	0.0	0.34	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0		
6	0.0	0.57	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.75		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.34	0.0	0.08		
8	0.03	0.01	0.10	0.0	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	3.03	0.0	0.33	0.0	0.22	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.25	0.0	1.08	0.0	0.36	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.07	1.40	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0		
14	0.0	0.22	0.0	0.0	0.33	0.48	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.81	0.0	0.0	0.0	0.0		
17	0.52	0.0	0.0	1.30	0.52	0.0	0.0	0.0	0.0	0.0	0.81	0.0		
18	0.69	0.0	0.51	0.23	0.0	0.0	0.28	3.31	0.0	0.0	3.63	0.0		
19	0.01	0.0	0.0	0.0	0.0	0.52	0.0	0.22	0.02	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.98	0.0	0.0	0.0	0.0		
21	0.10	0.15	0.0	0.0	0.0	0.59	0.12	0.57	0.0	0.0	0.0	1.12		
22	0.06	0.31	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0		
23	0.04	0.0	1.38	0.0	0.0	0.12	0.98	0.0	0.02	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.87	0.35	0.0	0.0	0.0	0.0	0.0	0.01		
25	0.0	0.0	0.0	0.0	0.91	0.0	0.0	0.0	0.0	0.0	0.0	1.07		
26	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0		
27	0.51	0.0	0.0	0.13	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.47		
29	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.06		
30	1.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49		
31	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.0	1.04	0.0	0.0		
TOTAL	4.44	4.71	2.52	9.01	3.25	3.80	2.65	7.97	3.69	1.82	5.84	9.03		
STA AV	3.90	4.72	4.87	4.93	4.14	3.03	3.85	4.08	4.80	2.33	4.48	5.45		

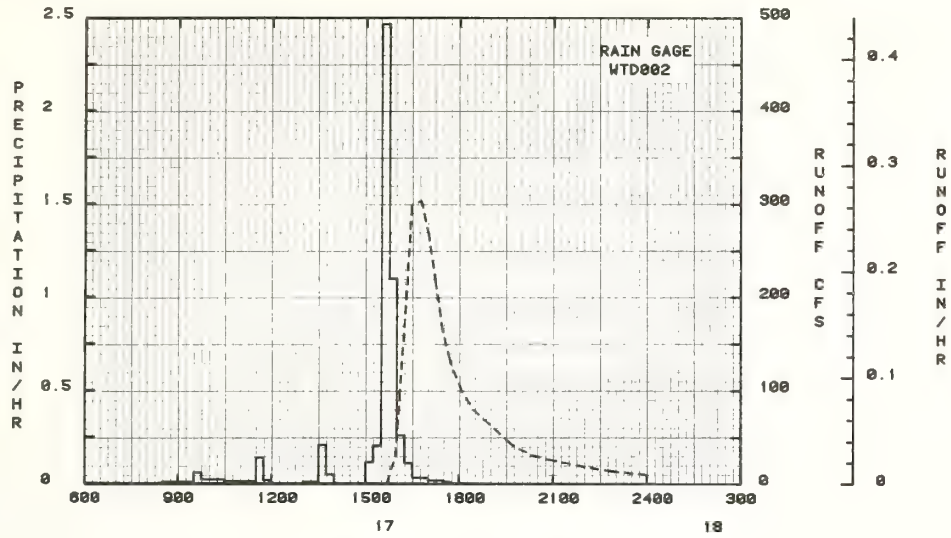
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 8 and 33. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED W-5												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.100	64.491	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.155	57.952	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.210	2.204	0.0	0.0	0.100	0.0	0.0	0.0	4.875	0.0	0.0	0.0
4	0.105	1.372	0.0	30.585	0.100	0.0	0.0	0.0	17.957	0.0	0.0	0.0
5	0.0	0.955	0.0	21.825	0.100	0.0	0.0	0.0	12.000	0.0	0.0	0.0
6	0.0	10.560	0.0	2.625	0.100	0.0	0.0	0.0	0.105	0.0	0.0	17.422
7	0.0	0.654	0.0	0.871	0.100	0.0	0.0	0.0	1.245	0.0	0.0	2.365
8	0.0	0.327	0.0	0.487	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	61.329	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	38.445	0.0	3.282	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.569	0.0	0.0	0.0	0.0	0.0	0.0	2.167	0.0
12	0.0	0.0	0.0	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.184	0.0
13	0.0	0.0	0.0	25.948	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	6.345	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	5.895	0.0	0.988	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.868	0.0	0.487	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.019	0.0	0.0	26.158	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	6.933	0.0	0.211	4.641	0.050	0.0	0.0	11.490	0.0	0.0	42.525	0.0
19	2.354	0.0	0.0	1.327	0.0	0.0	0.0	0.017	0.0	0.0	6.282	0.0
20	0.339	0.0	0.0	0.327	0.0	0.0	0.0	26.734	0.0	0.0	0.163	0.0
21	0.169	0.0	0.0	0.0	0.0	0.0	0.0	5.394	0.0	0.0	0.0	9.526
22	0.0	1.042	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.0	0.0	1.619
23	0.0	0.207	18.095	0.0	0.0	0.0	0.176	0.0	0.0	0.0	0.0	0.486
24	0.0	0.0	4.101	0.0	0.103	0.0	0.0	0.0	0.0	0.0	0.0	0.383
25	0.0	0.0	0.426	0.0	6.143	0.0	0.0	0.0	0.0	0.0	0.0	21.188
26	0.0	0.0	0.243	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.584
27	2.665	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.240
28	4.809	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.943
29	0.468	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.872
30	54.698	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.947
31	11.396	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.043
MEAN	2.7232	5.2330	0.7444	7.4326	0.2354	0.1094	0.0057	1.4078	1.2061	0.0	1.7107	7.0521
INCHES	1.778	3.086	0.486	4.697	0.154	0.069	0.008	0.919	0.762	0.0	1.222	5.204
STA AV	1.406	1.843	1.797	1.430	0.701	0.264	0.330	0.452	0.580	0.230	.894	1.805

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.02106 prior to Oct. 1 (0.02038 after Sept. 30). Quality of records: Good, estimated to be within 10% of actual. STA AV based on 13 yr (1957-69) record period.

1969 SELECTED RUNOFF EVENT OXFORD, MISSISSIPPI WATERSHED W-5												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17, 1969												
4-17	RG WTD002	0.008	4-17	RG WTD002	830	0.0	0.0	4-17	1542	1.260	0.0	
	0.0				845	0.0077	0.00		1558	30.000	0.0037	
					900	0.0077	0.00		1606	100.630	0.0113	
					915	0.0077	0.01		1618	198.790	0.0376	
					930	0.0077	0.01		1628	299.180	0.0740	
WATERSHED CONDITIONS:												
About 23% of area in cultivation, primarily cotton, ryegrass and corn, poor to fair cover; 51% in pasture and idle land with fair to good cover; 25% in woods, good cover; 1% in bare gullies.					945	0.0596	0.02	1646	303.400	0.1533		
					1000	0.0201	0.03	1700	268.500	0.2119		
					1015	0.0201	0.03	1714	216.800	0.2616		
					1030	0.0201	0.04	1728	162.670	0.3005		
					1045	0.0123	0.04	1744	127.930	0.3345		
					1100	0.0123	0.04	1806	98.000	0.3709		
					1115	0.0123	0.05	1828	78.750	0.3993		
					1130	0.0123	0.05	1908	56.580	0.4395		
					1145	0.1400	0.08	1944	40.390	0.4656		
					1200	0.0154	0.09	2022	30.000	0.4852		
					1300	0.0	0.09	2106	24.140	0.5026		
					1315	0.0119	0.09	2200	18.200	0.5193		
					1330	0.0119	0.09	2252	13.770	0.5315		
					1345	0.2073	0.15	2400	9.770	0.5432		
					1400	0.0489	0.16					
					1500	0.0	0.16					
					1515	0.1154	0.19					
					1530	0.2037	0.24					
					1545	2.4640	0.85					
					1600	1.0953	1.13					
					1615	0.2569	1.19					
					1630	0.1080	1.22					
					1645	0.0323	1.23					
					1700	0.0323	1.24					
					1715	0.0159	1.24					
					1730	0.0159	1.24					
					1745	0.0082	1.25					

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000878. Thiessen weighted storm rainfall, rain gages 8 and 33. For 30-day antecedent P and Q, see table above and on previous page.



EVENT OF APRIL 17, 1969
OXFORD, MISSISSIPPI WATERSHED W-5

OXFORD, MISSISSIPPI WATERSHED W-10

LOCATION: Marshall Co., Miss.; 3.3 mi. NW of Chulahoma, on County road; Dry Fork Creek, Pigeon Roost Creek Watershed Yazoo River Basin.

AREA: 5530.00 acres 8.64 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													OXFORD, MISSISSIPPI WATERSHED W-10	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	5.06	5.27	2.67	9.12	3.05	3.05	1.89	7.72	2.22	1.75	6.56	9.80	58.16
	Q	1.208	2.156	0.118	2.967	0.022	0.001	0.0	0.205	0.010	0.0	0.490	3.241	10.418
STA AV	P	4.04	4.96	4.90	5.00	4.56	3.04	4.07	3.92	4.75	2.33	4.67	5.69	51.94
	Q	1.180	1.354	1.474	1.157	0.729	0.176	0.417	0.376	0.512	0.188	0.686	1.447	9.656
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval						
		Date	Date	Date	Date	Date	Date	6 Hours	12 Hours	1 Day	2 Days	8 Days		
		Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date
1969		4-9	0.319	12-28	0.290	12-28	0.512	2-1	1.136	2-1	1.494	12-28	2.181	12-26
													2.846	12-23
														3.105
MAXIMUMS FOR PERIOD OF RECORD														
		7-9	1.180	7-9	1.060	7-9	1.650	2-23	2.130	2-23	2.390	12-3	2.660	1-30
		1967	1967	1967	1967	1967	1962	1962	1962	1964	1957	1965	1965	1965

NOTES: Watershed conditions: About 23% in cultivation (cotton, corn and soybeans), fair cover November to March, poor cover April and May improving to good by mid-July; 34% in pasture and idle land, good cover April to October with fair cover remainder of year; 41% in woods, good cover; 2% bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1967. About 15% of drainage area above small desilting and retention dams. Monthly precipitation Thiessen weighted from rain gages 13, 14, 20, 24 and 26. Stream gaging station inoperative Mar. 4 to Dec. 2, 1968, runoff estimated for this period. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.3-3. Precipitation and runoff records began Jan. 1957. STA AV P is for 13 yr (1957-69) record period. STA AV Q is for 12 yr (Jan. 1957 thru Sept. 1965 and Oct. 1966 thru Dec. 1969) record period. Maximum discharge and volumes were not determined for period when station was inoperative, Mar. 4 to Dec. 2, 1968. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4W, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-10	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	2.37	0.0	0.0	0.0	0.04	0.0	0.0	0.05	0.24	0.0	0.0		
2	0.0	0.50	0.0	0.0	0.0	0.28	0.13	0.02	0.01	0.0	0.0	0.0		
3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0		
4	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	0.87	0.0	0.0	0.0		
5	0.0	0.11	0.0	0.38	0.0	0.0	0.22	0.0	0.15	0.0	0.0	0.0		
6	0.0	0.63	0.37	0.0	0.0	0.0	0.29	0.0	0.0	0.00	0.0	1.94		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.66	0.32	0.0	0.11		
8	0.02	0.02	0.11	0.0	0.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	2.83	0.0	0.21	0.0	0.04	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.30	0.0	0.71	0.0	0.26	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.05	1.55	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	2.00	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0		
14	0.0	0.24	0.0	0.0	0.13	0.77	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.64	0.0	0.0	0.0	0.0		
17	0.78	0.0	0.0	1.42	0.52	0.0	0.0	0.0	0.0	0.0	1.03	0.0		
18	0.72	0.0	0.56	0.22	0.01	0.0	0.12	3.86	0.0	0.0	3.99	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.27	0.0	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.86	0.0	0.0	0.0	0.0		
21	0.10	0.17	0.0	0.0	0.0	0.52	0.0	0.62	0.0	0.0	0.0	1.21		
22	0.07	0.30	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0		
23	0.04	0.0	1.40	0.0	0.0	0.13	0.75	0.0	0.07	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.90	0.38	0.0	0.0	0.01	0.0	0.0	0.06		
25	0.0	0.0	0.0	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	1.12		
26	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0		
27	0.55	0.0	0.0	0.16	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.08	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	2.60		
29	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.17		
30	1.97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60		
31	0.63	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	1.02	0.0	0.0		
TOTAL	5.06	5.27	2.67	9.12	3.05	3.05	1.89	7.72	2.22	1.75	6.56	9.80		
STA AV	4.04	4.96	4.90	5.00	4.56	3.04	4.07	3.92	4.75	2.33	4.67	5.69		

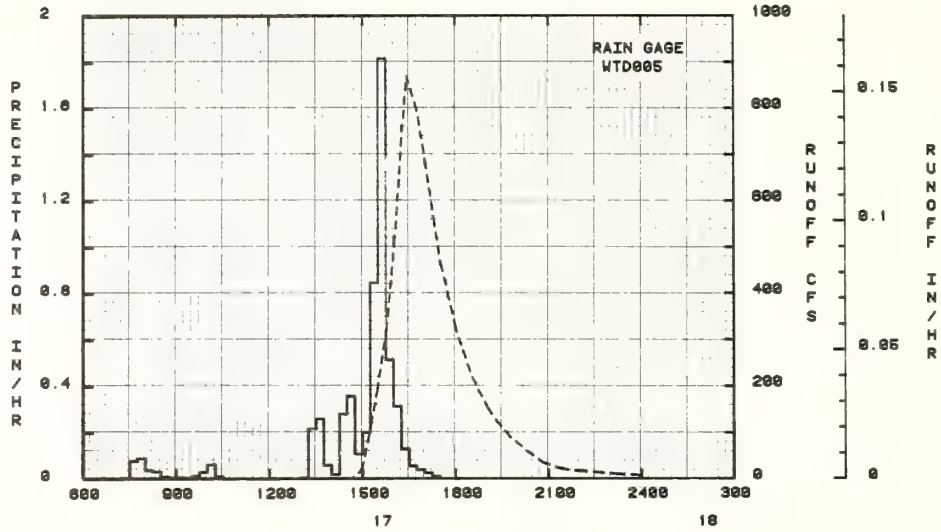
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 13, 14, 20, 24 and 26. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED #10												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.74	194.74	0.25	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.74	259.52	0.23	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.74	3.55	0.20	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.74	1.00	0.18	41.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.74	0.90	0.13	43.43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.68	16.46	0.10	7.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.65
7	0.63	6.53	0.21	1.63	0.0	0.0	0.0	0.0	1.67	0.0	0.0	0.52
8	0.63	0.91	0.32	1.32	0.0	0.0	0.0	0.0	0.62	0.0	0.0	0.08
9	0.63	0.78	0.16	192.11	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.03
10	0.63	0.74	0.0	175.37	0.0	0.10	0.0	0.0	0.03	0.0	0.0	0.0
11	0.63	0.71	0.0	1.99	0.0	0.0	0.0	0.0	0.0	0.0	2.25	0.0
12	0.63	0.54	0.0	1.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.63	0.36	0.0	119.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.63	0.30	0.0	19.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.63	7.66	0.0	0.91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.63	1.49	0.0	0.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.63	0.65	0.0	79.91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	14.93	0.60	0.0	1.11	0.0	0.0	0.0	47.51	0.0	0.0	106.37	0.0
19	3.43	0.53	0.0	0.14	0.0	0.0	0.0	0.16	0.0	0.0	5.34	0.0
20	0.91	0.44	0.0	0.11	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0
21	0.78	0.40	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.74	0.40	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.71	0.36	22.01	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.68	0.30	1.24	0.03	2.17	0.02	0.0	0.0	0.0	0.0	0.0	0.0
25	0.65	0.26	0.56	0.0	2.56	0.0	0.0	0.0	0.0	0.0	0.0	35.45
26	0.63	0.25	0.44	0.0	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.11
27	3.94	0.25	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	6.05	0.25	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.41
29	0.80		0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	463.39
30	190.49		0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	122.90
31	44.53		0.22		0.0		0.0	0.0		0.0		20.48
MEAN	9.050	17.889	0.885	22.979	0.163	0.004	0.0	1.540	0.081	0.0	3.799	24.291
INCHES	1.208	2.156	0.118	2.967	0.022	0.001	0.0	0.205	0.010	0.0	0.490	3.241
STA AV	1.180	1.354	1.474	1.157	0.729	0.176	0.417	0.376	0.512	0.148	0.686	1.447

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0043041. Quality of records: Poor, estimated to be within 20% of actual. Gaging station inoperative Mar. 4 to Dec. 2, 1968 - daily discharge estimated for this period. STA AV based on 12 yr (Jan. 1957 thru Sept. 1965 and Oct. 1966 thru Dec. 1969) record period.

1969 SELECTED RUNOFF EVENT OXFORD, MISSISSIPPI WATERSHED #10												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17, 1969												
BG WTD005			BG WTD005									
4-17	0.0	0.002	4-17	715	0.0	0.0	4-17	1432	0.900	0.0		
				730	0.0080	0.00		1442	3.030	0.0001		
				745	0.0800	0.02		1458	20.780	0.0007		
				800	0.0920	0.04		1514	104.000	0.0037		
				815	0.0362	0.05		1528	191.000	0.0099		
WATERSHED CONDITIONS: About 23% of area in cultivation, primarily cotton, corn, and soybeans, poor to fair cover; 34% in pasture and idle land, fair cover; 41% in woods, good cover; 2% in bare gullies.				830	0.0327	0.06		1546	321.630	0.0237		
				845	0.0110	0.06		1602	510.000	0.0436		
				900	0.0080	0.07		1616	735.000	0.0697		
				915	0.0077	0.07		1626	870.000	0.0937		
				930	0.0077	0.07		1646	794.260	0.1435		
				945	0.0151	0.07		1702	685.000	0.1789		
				1000	0.0320	0.08		1718	560.000	0.2087		
				1015	0.0640	0.10		1732	462.000	0.2301		
				1030	0.0120	0.10		1748	386.000	0.2504		
				1300	0.0	0.10		1802	317.680	0.2651		
				1315	0.0080	0.10		1832	218.000	0.2891		
				1330	0.2160	0.16		1902	152.000	0.3057		
				1345	0.2600	0.22		1918	125.000	0.3123		
				1400	0.0595	0.24		1946	88.970	0.3213		
				1415	0.0200	0.24		2018	59.060	0.3284		
				1430	0.2800	0.31		2048	34.950	0.3326		
				1445	0.3560	0.40		2124	22.000	0.3357		
				1500	0.1080	0.43		2200	16.440	0.3376		
				1515	0.2010	0.48		2246	12.810	0.3398		
				1530	0.8475	0.69		2326	9.830	0.3412		
				1545	1.8154	1.14		2400	7.490	0.3421		
				1600	0.5130	1.27						
				1615	0.3125	1.35						
				1630	0.1290	1.38						
				1645	0.0560	1.40						
				1700	0.0397	1.41						
				1715	0.0245	1.41						
				1730	0.0118	1.42						

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0001793. Thiessen weighted storm rainfall, rain gages 13, 14, 20, 24 and 26. For 30-day antecedent P and Q, see table above and on previous page.



EVENT OF APRIL 17, 1969
OXFORD, MISSISSIPPI WATERSHED W-10

OXFORD, MISSISSIPPI WATERSHED W-12

LOCATION: Marshall Co., Miss.; 5.6 mi. SW of Holly Springs, on county road; Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 22800.00 acres 35.60 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)							OXFORD, MISSISSIPPI				WATERSHED W-12						
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	4.33	4.67	2.36	8.33	3.04	3.05	3.34	7.75	3.07	1.74	5.58	8.81	56.07			
	Q	0.632	1.733	0.142	3.044	0.111	0.062	0.188	0.748	0.225	0.073	0.703	2.835	10.498			
STA AV	P	3.86	4.72	4.75	4.82	4.22	3.04	4.00	3.91	4.61	2.27	4.45	5.35	50.00			
	Q	0.763	1.076	1.125	0.799	0.501	0.165	0.245	0.271	0.315	0.107	0.469	0.931	6.766			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days					
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Date	Vol.			
1969		4- 9	0.259	4- 9	0.253	4- 9	0.467	4- 9	0.864	4- 9	1.231	12-28	1.621	12-28	2.223	12-23	2.450
MAXIMUMS FOR PERIOD OF RECORD																	
		2-23	0.350	2-23	0.350	2-23	0.680	2-23	1.380	2-23	1.620	11-27	1.930	1-30	2.280	3-24	4.360
		1962		1962		1962		1962		1962		1968		1957		1965	

NOTES: Watershed conditions: About 16% in cultivation (cotton, corn, and soybeans), fair cover November to March, poor cover April and May improving to good by mid-July; 29% in pasture and idle land, good cover April to October with fair cover remainder of year; 47% in woods, good cover; 1% in bare gullies; 7% urban. Percentages of total area in various land use categories are based on surveys made between 1968 to 1970. About 18% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.4-6. Monthly precipitation Thiessen weighted from 16 rain gages. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4W, Mississippi.

1969		DAILY PRECIPITATION (inches)					OXFORD, MISSISSIPPI WATERSHED W-12						
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	2.15	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.03	0.27	0.0	0.0
2	0.0	0.40	0.0	0.0	0.0	0.0	0.28	0.46	0.26	0.04	0.0	0.0	0.0
3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	1.81	0.0	0.0	0.0
5	0.0	0.10	0.0	0.0	0.23	0.0	0.0	0.12	0.0	0.12	0.0	0.0	0.0
6	0.0	0.56	0.28	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.00	0.0	1.71
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.30	0.0	0.0	0.11
8	0.03	0.05	0.09	0.0	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	2.84	0.0	0.23	0.0	0.19	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.26	0.0	0.65	0.0	0.20	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.06	1.11	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	1.59	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0
14	0.0	0.20	0.0	0.0	0.0	0.33	0.40	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.78	0.0	0.0	0.0	0.0
17	0.55	0.0	0.0	0.0	1.25	0.52	0.0	0.0	0.00	0.0	0.0	0.79	0.0
18	0.57	0.0	0.46	0.22	0.02	0.0	0.11	3.57	0.0	0.0	0.0	3.67	0.0
19	0.00	0.0	0.0	0.0	0.0	0.0	0.28	0.00	0.25	0.02	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	1.48	0.0	0.0	0.0	0.0
21	0.07	0.13	0.0	0.0	0.0	0.0	0.46	0.51	0.80	0.0	0.0	0.0	1.14
22	0.06	0.33	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0
23	0.07	0.0	1.33	0.0	0.0	0.0	0.10	1.50	0.0	0.02	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.67	0.53	0.0	0.0	0.01	0.0	0.0	0.02
25	0.0	0.0	0.0	0.0	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.95
26	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.04	0.0	0.0
27	0.48	0.0	0.0	0.13	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0
28	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	2.34
29	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.01
30	1.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53
31	0.57	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.99	0.0	0.0	0.0
TOTAL		4.33	4.67	2.36	8.33	3.04	3.05	3.34	7.75	3.07	1.74	5.58	8.81
STA AV		3.86	4.72	4.75	4.82	4.22	3.04	4.00	3.91	4.61	2.27	4.45	5.35

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (62.001-1). Daily precipitation values Thiessen weighted from rain gages 4 thru 9, 13, 15, 18 thru 20, 25, 29 thru 31 and 33. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED #12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.2	582.2	1.0	2.5	3.9	2.9	1.5	0.3	0.5	2.0	2.6	3.0
2	2.4	891.3	0.9	1.3	3.1	2.5	1.5	0.3	0.4	2.2	2.6	2.9
3	2.4	39.4	1.0	1.6	2.7	2.1	1.5	0.3	5.4	2.2	2.6	2.7
4	2.3	14.7	1.1	88.4	2.8	2.1	1.4	0.3	103.6	2.2	2.6	2.2
5	2.2	10.3	1.0	251.6	2.7	2.2	1.5	0.3	58.1	2.2	2.6	2.3
6	2.1	47.1	1.1	17.7	2.5	2.1	1.5	0.3	2.7	2.2	2.6	118.6
7	1.9	7.7	1.3	7.2	2.2	2.1	1.5	0.3	3.3	2.2	2.6	34.6
8	1.5	5.8	1.3	3.5	3.6	2.2	1.0	0.2	2.1	2.2	2.6	12.0
9	1.4	4.9	1.2	952.5	2.5	2.2	0.6	0.2	1.9	2.2	2.6	10.0
10	1.4	3.9	1.3	581.9	2.3	2.7	0.5	0.2	1.9	2.2	2.7	8.7
11	1.5	3.3	1.3	23.0	2.6	1.9	0.8	0.2	2.0	2.2	3.3	7.4
12	1.3	2.9	1.2	9.2	2.4	1.9	1.0	0.2	1.9	2.2	3.7	7.4
13	1.3	2.7	0.9	337.5	2.0	1.9	1.0	0.2	1.9	2.2	2.6	7.1
14	1.2	2.5	0.9	118.9	1.9	2.1	1.1	0.2	1.9	2.2	2.6	6.3
15	1.1	20.5	1.0	23.7	1.8	2.1	0.9	0.1	2.0	2.2	2.6	6.0
16	1.1	7.0	0.9	12.8	1.9	1.9	0.8	0.3	2.0	2.2	2.2	5.8
17	1.0	1.6	0.9	325.4	2.3	2.0	0.8	0.3	1.8	2.2	2.7	5.5
18	7.2	0.9	0.9	74.1	2.3	2.1	1.0	265.4	1.7	2.2	491.5	5.0
19	2.7	0.8	0.9	20.5	2.0	2.1	0.9	35.2	1.9	2.2	103.8	5.0
20	1.0	0.8	0.9	7.9	2.1	2.0	0.6	284.0	1.7	2.2	3.5	5.5
21	0.8	0.9	0.9	6.5	2.1	2.0	6.5	115.1	1.5	2.2	3.0	51.8
22	0.8	2.1	0.7	6.3	2.1	1.8	1.0	6.3	1.5	2.2	3.0	15.4
23	0.8	1.6	53.5	5.7	2.2	1.5	147.5	1.0	1.8	2.2	3.0	11.4
24	0.7	1.1	32.3	5.5	5.0	2.6	1.1	0.5	1.8	2.2	3.0	10.0
25	0.5	1.0	6.0	5.8	26.0	1.3	0.6	0.6	1.7	2.4	3.0	152.3
26	0.3	1.1	4.1	5.7	4.2	1.4	0.5	0.7	1.7	2.6	3.0	17.9
27	0.3	1.1	4.2	5.5	3.4	1.5	0.5	0.7	1.8	2.6	3.0	9.6
28	5.6	1.1	3.6	5.2	3.0	1.5	0.5	0.7	1.7	2.6	3.0	563.3
29	1.1		3.1	4.6	3.0	1.5	0.4	0.7	1.6	2.6	3.0	1232.3
30	452.1		3.5	4.2	3.1	1.5	0.2	0.7	1.8	2.6	3.0	390.1
31	103.7		3.3		3.0		0.2	0.8		2.6		23.4
MEAN	19.537	59.299	4.390	97.202	3.433	1.989	5.805	23.123	7.189	2.265	22.460	87.596
INCHRS	0.632	1.733	0.142	3.044	0.111	0.062	0.188	0.748	0.225	0.073	0.703	2.835
STA AV	0.763	1.076	1.125	0.799	0.501	0.165	0.245	0.271	0.315	0.107	0.469	0.931

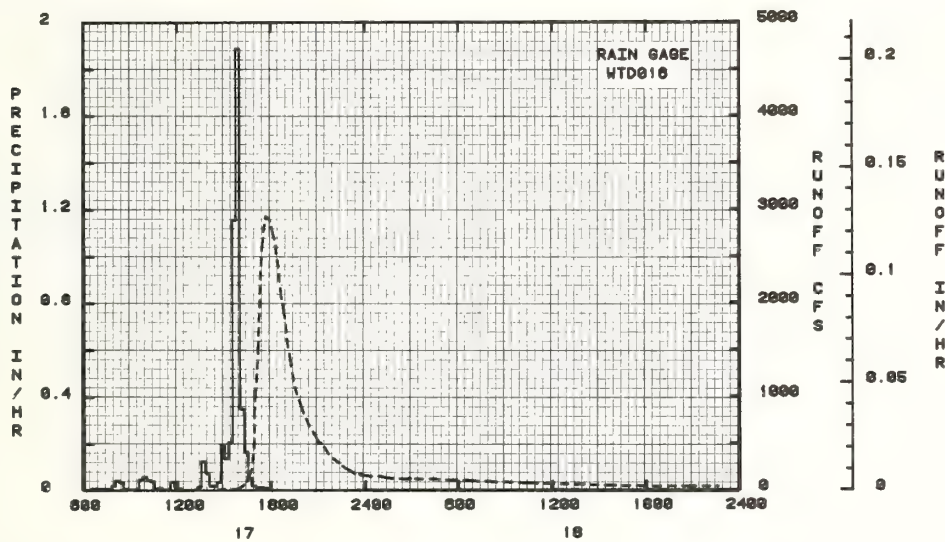
NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0010439. Quality of records: Good, estimated to be within 10% of actual. STA AV based on 13 yr (1957-69) record period.

1969			SELECTED RUNOFF EVENT				OXFORD, MISSISSIPPI				WATERSHED #12	
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17 - 18, 1969												
RG WTD016			RG WTD016									
4-17	0.00	0.008	4-17	630	0.0	0.0	4-17	1434	12.750	0.0		
				645	0.0081	0.00		1500	13.990	0.0003		
				700	0.0080	0.00		1538	14.640	0.0007		
				715	0.0080	0.01		1548	16.710	0.0008		
				730	0.0080	0.01		1558	28.810	0.0010		
WATERSHED CONDITIONS:				745	0.0046	0.01		1614	62.060	0.0015		
About 16% in cultivation,				800	0.0210	0.01		1630	117.900	0.0025		
primarily cotton, corn, and				815	0.0440	0.02		1644	228.540	0.0043		
soybeans, poor to fair cover;				830	0.0357	0.03		1654	475.200	0.0069		
29% in pasture and idle land,				845	0.0077	0.04		1656	886.000	0.0079		
fair to good cover; 47% in				900	0.0033	0.04		1700	1090.000	0.0108		
woods, good cover; 1% in				915	0.0040	0.04		1710	1512.950	0.0202		
bare gullies; 7% urban.				930	0.0047	0.04		1720	2338.000	0.0342		
				945	0.0480	0.05		1726	2618.000	0.0450		
				1000	0.0600	0.07		1734	2842.000	0.0609		
				1015	0.0440	0.08		1740	2930.000	0.0734		
				1030	0.0400	0.09		1756	2882.000	0.1071		
				1045	0.0080	0.09		1812	2682.000	0.1394		
				1100	0.0120	0.09		1824	2458.000	0.1618		
				1115	0.0037	0.09		1840	2049.370	0.1879		
				1130	0.0037	0.09		1852	1842.000	0.2048		
				1145	0.0361	0.10		1902	1604.000	0.2173		
				1200	0.0160	0.11		1916	1324.000	0.2322		
				1215	0.0073	0.11		1930	1102.000	0.2445		
				1230	0.0010	0.11		1946	958.000	0.2564		
				1300	0.0	0.11		2002	826.000	0.2667		
				1315	0.0040	0.11		2024	684.950	0.2788		
				1330	0.0160	0.11		2042	610.000	0.2873		
				1345	0.1246	0.14		2102	509.760	0.2954		
				1400	0.0760	0.16		2112	499.640	0.2991		
				1415	0.0200	0.17		2128	439.480	0.3045		
				1430	0.0168	0.17		2138	390.000	0.3075		
				1445	0.0359	0.18		2158	333.440	0.3127		
				1500	0.1954	0.23		2216	292.860	0.3172		
				1515	0.1360	0.26		2238	245.130	0.3211		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000435. Thiessen weighted storm rainfall, rain gages 4 thru 9, 13, 15, 18 thru 20, 25, 29 thru 31 and 33. For 30-day antecedent P and Q, see table on pp. 62.004-1 and 62.004-2.

1969	SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI			WATERSHED W-12			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF APRIL 17 - 18, 1969 (CONTINUED)										
4-17			1530		0.2046	0.32	4-17	2306	198.840	0.3256
			1545		1.1562	0.60		2320	177.410	0.3275
			1600		1.8877	1.08		2346	159.840	0.3307
			1615		0.3480	1.16		2400	157.410	0.3323
			1630		0.1640	1.20	4-18	24	147.860	0.3350
			1645		0.0520	1.22		56	147.860	0.3384
			1700		0.0200	1.22		146	123.780	0.3433
			1715		0.0120	1.23		228	119.860	0.3470
			1730		0.0130	1.23		254	121.810	0.3493
			1745		0.0083	1.23		314	115.950	0.3510
			1800		0.0040	1.23		416	117.900	0.3563
								524	107.950	0.3619
								624	103.860	0.3665
								714	93.880	0.3701
								824	84.940	0.3746
								856	84.940	0.3766
								1010	73.350	0.3808
								1100	68.430	0.3834
								1134	70.060	0.3851
								1204	65.210	0.3866
								1400	56.020	0.3917
								1602	46.270	0.3962
								1800	39.250	0.3999
								1950	37.130	0.4029
								2052	37.130	0.4046
								2108	39.250	0.4050
								2136	38.180	0.4058
								2234	36.090	0.4074

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000435. Thiessen weighted storm rainfall, rain gages 4 thru 9, 13, 15, 18 thru 20, 25, 29 thru 31 and 33. For 30-day antecedent P and Q, see table on pp. 62.004-1 and 62.004-2.



EVENT OF APRIL 17 - 18, 1969
OXFORD, MISSISSIPPI WATERSHED W-12

OXFORD, MISSISSIPPI WATERSHED W-17

LOCATION: Marshall Co., Miss.; 7.8 mi. SW of Holy Springs on County road; Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 32100.00 acres 50.20 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)							OXFORD, MISSISSIPPI WATERSHED W-17								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	4.39	4.68	2.37	8.50	2.95	2.77	3.60	7.99	2.96	1.68	5.67	8.84	56.40	
	Q	1.059	2.328	0.354	3.662	0.268	0.224	0.492	1.136	0.367	0.203	0.842	3.011	13.946	
STA AV	P	3.91	4.76	4.75	4.89	4.23	3.04	4.08	4.09	4.48	2.25	4.44	5.42	50.36	
	Q	1.087	1.409	1.487	1.135	0.813	0.335	0.473	0.546	0.505	0.293	0.727	1.241	10.049	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		4- 9	0.191	4- 9	0.191	4- 9	0.378	4- 9	0.929	4- 9	1.273	4- 9	1.800	12-28	2.336
														1-30	2.747
MAXIMUMS FOR PERIOD OF RECORD															
		2-23	0.210	2-23	0.210	2-23	0.410	2-23	1.120	2-23	1.500	12- 3	2.010	3-24	2.390
		1962		1962		1962		1962		1962		1964		1965	1965

NOTES: Watershed conditions: About 18% in cultivation (cotton, corn and soybeans), fair cover November to March, poor cover April and May improving to good by mid-July; 28% in pasture and idle land, good cover April to October with fair cover remainder of year; 48% in woods, good cover; 1% in bare gullies; 5% urban. Percentages of total area in various land use categories are based on surveys made from 1965 to 1970. About 17% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.5-5. Monthly precipitation Thiessen weighted from 21 rain gages. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holy Springs 4N, Mississippi.

1969 DAILY PRECIPITATION (inches)														OXFORD, MISSISSIPPI WATERSHED W-17	
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
	1	0.0	2.15	0.0	0.0	0.0	0.03	0.0	0.0	0.05	0.26	0.0	0.0		
	2	0.0	0.39	0.0	0.0	0.0	0.27	0.41	0.29	0.03	0.0	0.0	0.0		
	3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.0	0.0	0.0		
	4	0.0	0.0	0.0	1.67	0.0	0.0	0.0	0.0	1.67	0.0	0.0	0.0		
	5	0.0	0.10	0.0	0.23	0.0	0.0	0.12	0.0	0.14	0.0	0.0	0.0		
	6	0.0	0.55	0.28	0.0	0.0	0.0	0.06	0.0	0.0	0.00	0.0	1.73		
	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.28	0.0	0.12		
	8	0.03	0.05	0.10	0.0	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	9	0.0	0.0	0.0	3.06	0.0	0.21	0.0	0.23	0.0	0.0	0.0	0.0		
	10	0.0	0.0	0.0	0.26	0.0	0.56	0.0	0.16	0.0	0.0	0.0	0.0		
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.06	1.10	0.0		
	12	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0		
	13	0.0	0.0	0.0	1.62	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0		
	14	0.0	0.19	0.0	0.0	0.26	0.32	0.0	0.0	0.0	0.0	0.0	0.0		
	15	0.0	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	16	0.00	0.0	0.0	0.0	0.00	0.0	0.0	0.79	0.0	0.0	0.0	0.0		
	17	0.57	0.0	0.0	1.27	0.50	0.0	0.0	0.00	0.0	0.0	0.82	0.0		
	18	0.56	0.0	0.49	0.23	0.03	0.0	0.11	3.64	0.0	0.0	3.76	0.0		
	19	0.00	0.0	0.0	0.0	0.0	0.21	0.02	0.24	0.01	0.0	0.0	0.0		
	20	0.0	0.0	0.0	0.0	0.0	0.09	0.0	1.58	0.0	0.0	0.0	0.0		
	21	0.07	0.13	0.0	0.0	0.0	0.44	0.38	0.84	0.0	0.0	0.0	1.15		
	22	0.06	0.33	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0		
	23	0.08	0.0	1.32	0.0	0.0	0.09	1.93	0.0	0.03	0.0	0.0	0.0		
	24	0.0	0.0	0.0	0.0	0.69	0.58	0.0	0.0	0.01	0.0	0.0	0.02		
	25	0.0	0.0	0.0	0.0	0.73	0.0	0.0	0.0	0.0	0.0	0.0	0.94		
	26	0.14	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.04	0.0	0.0		
	27	0.45	0.0	0.0	0.14	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0		
	28	0.0	0.06	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	2.25		
	29	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.07		
	30	1.75	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.56		
	31	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.96	0.0	0.0		
TOTAL		4.39	4.68	2.37	8.50	2.95	2.77	3.60	7.99	2.96	1.68	5.67	8.84		
STA AV		3.91	4.76	4.75	4.89	4.23	3.04	4.08	4.09	4.48	2.25	4.44	5.42		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 2, 4 thru 9, 13 thru 15, 17 thru 20, 22, 25, 28 thru 31 and 33. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED W-17												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	14.3	914.2	10.1	11.8	10.7	9.1	10.3	7.3	16.2	10.3	8.0	9.9
2	14.6	1526.5	9.9	11.6	10.7	9.7	10.3	7.7	10.5	10.3	8.0	9.9
3	14.1	82.3	9.3	11.6	10.7	10.1	10.3	7.5	16.4	10.3	8.0	9.9
4	13.8	38.7	8.9	75.4	10.9	9.9	10.3	7.5	109.8	10.3	8.0	9.9
5	13.8	32.1	8.7	352.3	10.9	9.7	10.3	7.8	95.6	10.3	8.0	9.9
6	13.4	163.6	9.5	33.8	10.7	9.7	10.3	7.8	11.4	10.3	8.0	167.2
7	13.4	30.9	9.5	19.3	10.7	10.1	10.3	7.7	13.0	10.3	8.0	49.3
8	13.6	18.6	8.9	17.9	13.3	9.7	10.3	7.7	11.0	9.9	8.0	12.6
9	13.4	15.9	8.7	1503.9	12.5	9.9	10.3	7.7	9.3	9.5	8.0	9.9
10	13.4	14.6	8.7	1029.4	11.1	11.2	10.3	7.7	9.5	9.5	8.0	9.9
11	13.6	14.3	8.9	65.9	10.7	10.1	10.3	7.8	9.5	9.3	10.1	9.9
12	13.6	14.1	8.5	33.6	10.5	9.7	10.3	7.8	9.1	9.1	10.7	9.9
13	13.8	13.6	8.4	601.8	10.1	9.7	10.3	7.7	9.1	9.1	9.5	9.9
14	13.8	14.1	8.4	215.7	10.1	9.5	10.3	7.7	9.1	8.9	9.5	9.9
15	13.6	79.2	8.4	36.6	10.1	9.7	10.3	7.8	9.1	8.7	9.5	9.9
16	13.4	29.7	8.2	20.7	10.3	9.9	10.3	8.7	8.9	8.5	9.3	9.9
17	16.2	14.5	8.2	534.8	11.3	10.1	10.3	8.9	8.9	8.4	10.1	9.9
18	43.2	11.3	10.1	143.0	11.1	10.1	10.3	456.1	8.9	8.2	682.1	9.9
19	26.5	10.5	9.5	43.3	10.3	10.1	10.3	72.1	8.9	8.0	190.9	9.9
20	16.0	10.1	8.5	25.1	10.1	10.5	9.7	540.0	9.3	8.0	14.5	10.3
21	13.6	10.3	8.2	21.7	9.9	10.3	16.8	226.1	9.3	7.7	10.5	73.5
22	13.4	16.4	8.0	20.7	9.5	9.9	10.6	17.4	9.3	7.7	9.9	17.0
23	13.6	14.3	126.2	18.3	9.3	11.0	365.4	10.5	9.9	8.0	9.9	11.6
24	13.6	11.1	64.3	16.0	13.9	12.6	13.8	9.3	10.5	8.0	9.9	10.3
25	13.1	10.3	16.0	13.8	44.3	9.9	7.7	8.9	10.5	8.0	9.9	193.6
26	14.1	9.9	13.1	13.6	11.6	9.9	7.5	8.5	10.3	8.0	9.9	25.3
27	16.0	9.7	12.4	13.6	9.5	10.1	7.7	8.9	10.3	8.0	9.9	12.5
28	37.0	9.7	12.2	12.2	9.3	10.3	7.7	9.5	10.5	8.0	9.9	481.5
29	16.8		12.9	10.7	9.3	10.1	7.3	10.1	10.5	8.0	9.9	2050.2
30	743.4		12.9	10.5	9.1	10.1	7.2	10.5	10.3	8.0	9.9	695.3
31	211.6		12.0		9.1		7.2	11.6		8.0		92.2
MEAN	46.06	112.15	15.41	164.61	11.66	10.07	21.41	49.42	16.49	8.85	37.85	130.98
INCHES	1.059	2.328	0.354	3.662	0.268	0.224	0.492	1.136	0.367	0.203	0.842	3.011
STA AV	1.087	1.409	1.487	1.135	0.813	0.335	0.473	0.546	0.505	0.293	0.727	1.241

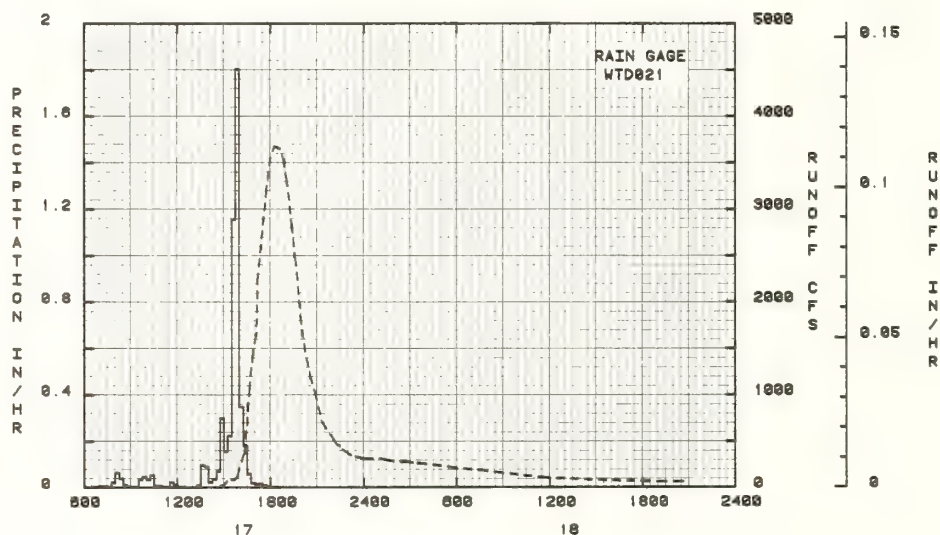
NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0007415. Quality of records: Good, estimated to be within 10% of actual. STA AV based on 13 yr (1957-69) record period.

1969 SELECTED RUNOFF EVENT OXFORD, MISSISSIPPI WATERSHED W-17									
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)
EVENT OF APRIL 17 - 18, 1969									
RG WTD021			RG WTD021						
4-17	0.00	0.009	4-17	630	0.0	0.0	4-17	1446	20.960
				645	0.0040	0.00		1500	28.310
				700	0.0043	0.00		1512	69.000
				715	0.0080	0.00		1532	88.950
				730	0.0080	0.01		1540	88.950
WATERSHED CONDITIONS:									
About 18% of area in cultivation, primarily cotton, corn, and soybeans, poor to fair cover; 28% in pasture and idle land, fair to good cover; 48% in woods, good cover; 1% in bare gullies; 5% urban.									
				745	0.0037	0.01		1550	110.910
				800	0.0231	0.01		1600	212.070
				815	0.0644	0.03		1614	335.890
				830	0.0400	0.04		1620	382.180
				845	0.0118	0.04		1634	838.500
				900	0.0041	0.04		1640	1134.000
				915	0.0030	0.04		1654	1482.000
				930	0.0035	0.04		1706	1668.000
				945	0.0360	0.05		1710	2232.000
				1000	0.0480	0.07		1718	2466.000
				1015	0.0360	0.07		1746	3252.000
				1030	0.0550	0.09		1800	3558.000
				1045	0.0075	0.09		1814	3678.000
				1100	0.0080	0.09		1838	3654.000
				1115	0.0040	0.09		1850	3534.000
				1130	0.0040	0.09		1906	3252.000
				1145	0.0240	0.10		1922	2826.000
				1200	0.0114	0.10		1936	2466.000
				1215	0.0040	0.10		1944	2238.000
				1230	0.0007	0.10		1956	1842.000
				1300	0.0	0.10		2014	1464.000
				1315	0.0	0.10		2034	1200.000
				1330	0.0120	0.11		2058	943.000
				1345	0.0966	0.13		2118	706.130
				1400	0.0888	0.15		2134	632.980
				1415	0.0239	0.16		2200	533.660
				1430	0.0368	0.17		2218	458.130
				1445	0.0720	0.19		2226	448.570
				1500	0.3000	0.26		2238	407.000
				1515	0.1560	0.30		2310	348.060

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000309. Thiessen weighted storm rainfall, rain gages 2, 4 thru 9, 13 thru 15, 17 thru 20, 22, 25, 28 thru 31 and 33. For 30-day antecedent P and Q, see table on pp. 62.005-1 and 62.005-2.

1969	SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI			WATERSHED W-17			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
			EVENT OF	APRIL	17 - 18, 1969 (CONTINUED)					
			4-17	1530	0.2242	0.36	4-17	2332	329.870	0.3831
				1545	1.1563	0.65		2344	320.920	0.3851
				1600	1.8045	1.10		2400	309.100	0.3877
				1615	0.3475	1.18	4-18	34	312.050	0.3931
				1630	0.1800	1.23		108	306.160	0.3985
				1645	0.0600	1.24		154	283.210	0.4055
				1700	0.0192	1.25		242	277.720	0.4124
				1715	0.0160	1.25		310	266.960	0.4163
				1730	0.0160	1.26		336	264.300	0.4199
				1745	0.0089	1.26		432	240.770	0.4272
				1800	0.0033	1.26		602	207.000	0.4376
				1815	0.0001	1.26		732	187.700	0.4467
								900	153.550	0.4544
								1048	121.940	0.4621
								1200	102.680	0.4663
								1348	92.370	0.4717
								1538	77.760	0.4765
								1800	69.000	0.4819
								1932	61.100	0.4850
								2038	61.100	0.4871

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000309. Thiessen weighted storm rainfall, rain gages 2, 4 thru 9, 13 thru 15, 17 thru 20, 22, 25, 28 thru 31 and 33. For 30-day antecedent P and Q, see table on pp. 62.005-1 and 62.005-2.



EVENT OF APRIL 17 - 18, 1969
OXFORD, MISSISSIPPI WATERSHED W-17

OXFORD, MISSISSIPPI WATERSHED W-24

LOCATION: Marshall Co., Miss.; 2.2 mi. SW of Holly Springs on County road; Little Sand Ditch, Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 512.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													OXFORD, MISSISSIPPI WATERSHED W-24	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969 P	4.10	4.44	2.24	8.48	2.40	2.10	3.07	8.15	2.84	1.65	5.53	8.41	53.42	
Q	1.459	1.808	0.244	3.292	0.011	0.000	0.039	0.881	0.151	0.0	0.647	2.158	10.689	
STA AV P	3.93	4.84	4.84	4.83	4.29	2.88	4.03	3.87	4.30	2.22	4.42	5.33	49.77	
Q	1.161	1.534	1.363	1.285	0.581	0.102	0.206	0.338	0.260	0.131	0.575	1.132	8.668	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
Maximum Discharge for Selected Time Interval														
Date	Rate	1 Hour	2 Hours	6 Hours	12 Hours	1 Day	2 Days	8 Days						
Date	Rate	Vol.	Vol.	Vol.	Vol.	Date	Vol.	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	8-21	0.553	4-9	0.414	4-9	0.657	4-9	1.064	4-9	1.458	4-9	1.797	4-9	1.857
													1-27	2.439
MAXIMUMS FOR PERIOD OF RECORD														
	2-23	1.040	2-23	0.900	2-23	1.360	2-23	1.640	2-23	1.860	3-28	2.390	1-30	3.160
	1962		1962		1962		1962		1962		1965		1957	3-24
														1965

NOTES: Watershed conditions: About 4% in cultivation (cotton), fair cover November to March, poor cover April and May improving to good by mid-July; 12% in pasture and idle land, good cover April to October with fair cover remainder of year; 83% in woods, good cover; 1% in bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1968. About 7% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.7-4. Monthly precipitation Thiessen weighted from rain gages 4 and 30. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4N, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-24	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	2.04	0.0	0.0	0.0	0.06	0.0	0.0	0.01	0.31	0.0	0.0		
2	0.0	0.31	0.0	0.0	0.0	0.24	0.78	0.78	0.03	0.0	0.0	0.0		
3	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0		
4	0.0	0.0	0.0	1.51	0.0	0.0	0.0	0.0	1.72	0.0	0.0	0.0		
5	0.0	0.12	0.0	0.16	0.0	0.0	0.06	0.0	0.17	0.0	0.0	0.0		
6	0.0	0.57	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.64		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.24	0.0	0.10		
8	0.04	0.05	0.09	0.0	0.95	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	3.32	0.0	0.16	0.0	0.27	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.22	0.0	0.32	0.0	0.00	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.04	1.03	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	1.56	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0		
14	0.0	0.19	0.0	0.0	0.08	0.08	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.0	0.0	0.0	0.0		
17	0.53	0.0	0.0	1.38	0.47	0.0	0.0	0.0	0.0	0.0	0.79	0.0		
18	0.47	0.0	0.45	0.19	0.01	0.0	0.0	3.75	0.0	0.0	3.71	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.28	0.06	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.29	0.0	0.0	0.0	0.0		
21	0.07	0.14	0.0	0.0	0.0	0.28	0.33	1.87	0.0	0.0	0.0	1.21		
22	0.04	0.34	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0		
23	0.09	0.0	1.29	0.0	0.0	0.07	1.42	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.36	0.63	0.0	0.0	0.0	0.0	0.0	0.01		
25	0.0	0.0	0.0	0.0	0.52	0.0	0.0	0.0	0.0	0.0	0.0	0.89		
26	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0		
27	0.42	0.0	0.0	0.14	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.04	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	1.97		
29	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.06		
30	1.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53		
31	0.68	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.95	0.0	0.0		
TOTAL	4.10	4.44	2.24	8.48	2.40	2.10	3.07	8.15	2.84	1.65	5.53	8.41		
STA AV	3.93	4.84	4.84	4.83	4.29	2.88	4.03	3.87	4.30	2.22	4.42	5.33		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 4 and 30. STA AV based on 13 yr (1957-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					OXFORD, MISSISSIPPI WATERSHED W-24						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.768	14.818	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.768	17.590	0.0	0.0	0.0	0.0	0.0	0.474	0.0	0.0	0.0	0.0
3	0.697	1.719	0.0	0.0	0.0	0.0	0.0	0.003	0.039	0.0	0.0	0.0
4	0.775	0.535	0.0	3.611	0.0	0.0	0.0	0.0	1.788	0.0	0.0	0.0
5	0.711	0.302	0.0	2.288	0.0	0.0	0.0	0.0	1.226	0.0	0.0	0.0
6	0.563	2.518	0.0	0.185	0.0	0.0	0.0	0.0	0.195	0.0	0.0	2.668
7	0.627	0.231	0.0	0.069	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.250
8	0.627	0.115	0.0	0.069	0.170	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.464	0.0	0.0	26.319	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.346	0.0	0.0	13.387	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.445	0.0	0.0	0.741	0.0	0.0	0.0	0.0	0.0	0.0	0.409	0.0
12	0.365	0.0	0.0	0.311	0.0	0.0	0.0	0.0	0.0	0.0	0.264	0.0
13	0.266	0.0	0.0	7.068	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.302	0.0	0.0	2.064	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.302	0.748	0.0	0.401	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.266	0.199	0.0	0.238	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.736	0.048	0.0	7.671	0.0	0.0	0.0	0.0	0.0	0.0	0.076	0.0
18	1.542	0.0	0.0	2.872	0.0	0.0	0.0	6.648	0.0	0.0	12.699	0.0
19	0.697	0.0	0.0	1.225	0.0	0.0	0.0	1.584	0.0	0.0	0.461	0.0
20	0.266	0.0	0.0	0.697	0.0	0.0	0.0	0.418	0.0	0.0	0.0	0.0
21	0.231	0.0	0.0	0.509	0.0	0.0	0.0	9.825	0.0	0.0	0.0	1.479
22	0.311	0.077	0.0	0.311	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.365
23	0.391	0.0	3.676	0.231	0.0	0.0	0.834	0.0	0.0	0.0	0.0	0.181
24	0.311	0.0	1.223	0.231	0.0	0.006	0.0	0.0	0.0	0.0	0.0	0.065
25	0.231	0.0	0.231	0.164	0.071	0.0	0.0	0.0	0.0	0.0	0.0	3.360
26	0.203	0.0	0.115	0.097	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.346
27	0.551	0.0	0.0	0.048	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.311
28	1.598	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.338
29	1.092	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.009
30	10.330	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.298
31	4.589	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.741
MEAN	1.0121	1.3893	0.1692	2.3603	0.0078	0.0002	0.0269	0.6114	0.1083	0.0	0.4636	1.4972
INCHES	1.459	1.808	0.244	3.292	0.011	0.000	0.039	0.881	0.151	0.0	0.647	2.158
STA AV	1.161	1.534	1.363	1.285	0.581	0.102	0.206	0.338	0.260	0.131	0.575	1.132

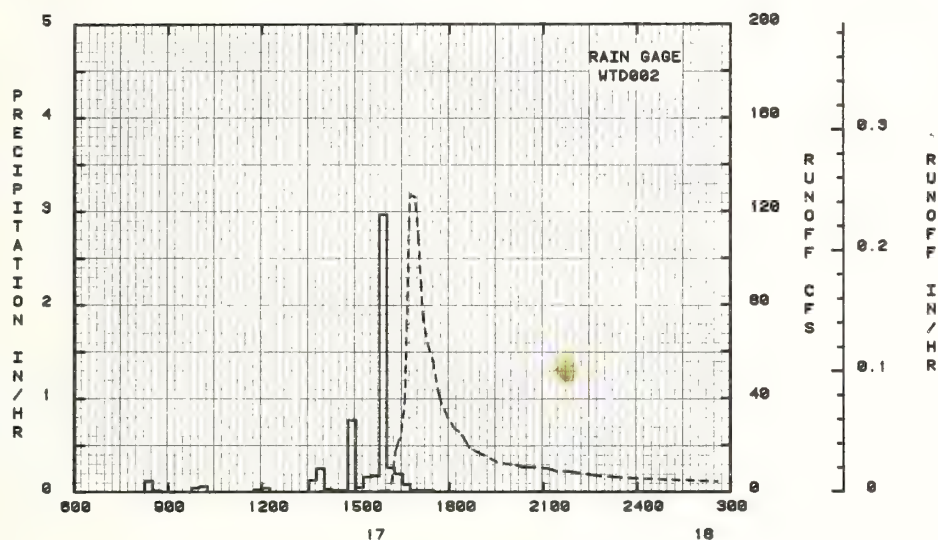
NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.046488. Quality of records: Poor, estimated to be within 20% of actual. STA AV based on 13 yr (1957-69) record period.

1969	SELECTED RUNOFF EVENT					OXFORD, MISSISSIPPI WATERSHED W-24					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF APRIL 17 - 18, 1969											
RG WTD002			RG WTD002								
4-17	0.0	0.006	4-17	815	0.0	0.0	4-17	1350	0.300	0.0	
				830	0.1240	0.03		1530	0.390	0.0011	
				845	0.0200	0.04		1548	0.500	0.0014	
				945	0.0	0.04		1604	0.630	0.0017	
				1000	0.0480	0.05		1608	3.920	0.0020	
WATERSHED CONDITIONS: About 4% of area in cultivation primarily cotton, poor to fair cover; 12% in pasture and idle land, fair to good cover; 83% in woods, good cover; 1% in bare gullies.				1015	0.0640	0.06		1616	17.480	0.0048	
				1030	0.0033	0.06		1622	22.430	0.0087	
				1145	0.0	0.06		1626	22.940	0.0116	
				1200	0.0280	0.07		1634	38.940	0.0196	
				1215	0.0450	0.08		1638	73.400	0.0269	
				1230	0.0040	0.08		1642	114.000	0.0390	
				1330	0.0	0.08		1644	127.000	0.0467	
				1345	0.1280	0.12		1654	126.000	0.0876	
				1400	0.2513	0.18		1700	108.550	0.1103	
				1415	0.0280	0.19		1706	86.160	0.1291	
				1430	0.0160	0.19		1710	72.600	0.1393	
				1445	0.0160	0.19		1718	63.000	0.1568	
				1500	0.7680	0.39		1728	56.000	0.1760	
				1515	0.0480	0.40		1738	42.660	0.1919	
				1530	0.1647	0.44		1744	37.770	0.1997	
	1545	0.1729	0.48		1756	31.800	0.2132				
	1600	2.9644	1.22		1810	26.940	0.2265				
	1615	0.2598	1.29		1818	25.730	0.2333				
	1630	0.1920	1.34		1824	24.000	0.2381				
	1645	0.0793	1.36		1838	19.000	0.2478				
	1700	0.0152	1.36		1848	17.480	0.2537				
	1715	0.0152	1.36		1906	15.460	0.2633				
	1730	0.0152	1.37		1930	12.620	0.2742				
					1958	11.730	0.2852				
					2010	11.290	0.2897				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001937. Thiessen weighted storm rainfall, rain gages 4 and 30. For 30-day antecedent P and Q, see table on pp. 62.007-1 and 62.007-2.

1969 SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI				WATERSHED W-24			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	(inches)	No-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 17 - 18, 1969 (CONTINUED)										
							4-17	2210	7.970	0.3268
								2250	6.810	0.3363
								2330	6.060	0.3446
								2400	5.700	0.3503
							4-18	234	4.270	0.3751

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001937. Thiessen weighted storm rainfall, rain gages 4 and 30. For 30-day antecedent P and Q, see table on pp. 62.007-1 and 62.007-2.



OXFORD, MISSISSIPPI WATERSHED W-28

LOCATION: Marshall Co., Miss.; 2.3 mi. SW of Holly Springs on State Highway No. 7; Walkers Bottom Creek, Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 1080.00 acres 1.69 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														OXFORD, MISSISSIPPI WATERSHED W-28															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	4.30	4.65	2.52	7.91	3.04	3.65	3.64	7.13	3.25	1.95	5.39	8.96	56.39															
	Q	0.224	1.236	0.043	1.362	0.016	0.002	0.179	0.445	0.158	0.0	0.071	1.647	5.384															
STA AV	P	3.85	4.75	4.70	4.70	4.09	3.13	3.94	3.67	4.57	2.37	4.42	5.38	49.57															
	Q	0.361	0.532	0.441	0.342	0.174	0.044	0.124	0.224	0.217	0.090	0.216	0.430	3.195															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge Date		1 Hour Date Vol.		2 Hours Date Vol.		Maximum Volume for 6 Hours Date Vol.		Selected Time Interval 12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.		8 Days Date Vol.													
1969		12-28	0.221	12-28	0.209	12-28	0.375	2- 1	0.799	2- 1	0.984	12-28	1.138	12-28	1.576	12-23	1.631												
MAXIMUMS FOR PERIOD OF RECORD																													
		8- 2	0.630	8- 2	0.570	8- 2	0.900	8- 2	1.220	8- 2	1.390	1-31	1.450	1-30	2.020	1-27	2.680												
		1967		1967		1967		1967		1967		1957		1957		1957													

NOTES: Watershed conditions: About 9% in cultivation (cotton and corn), fair cover November to March, poor cover April and May improving to good by mid-July; 27% in pasture and idle land, good cover April to October with fair cover remainder of year; 62% in woods, good cover; 2% in bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1969. About 60% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.8-5. Monthly precipitation Thiessen weighted from rain gages 5, 6 and 7. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4W, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-28	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	2.07	0.0	0.0	0.0	0.01	0.0	0.0	0.09	0.33	0.0	0.0		
2	0.0	0.43	0.0	0.0	0.0	0.29	0.66	0.16	0.0	0.0	0.0	0.0		
3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0		
4	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	2.44	0.0	0.0	0.0		
5	0.0	0.10	0.0	0.18	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0		
6	0.0	0.56	0.29	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	1.79		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.33	0.0	0.17		
8	0.02	0.09	0.09	0.0	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	2.43	0.0	0.31	0.0	0.29	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.24	0.0	0.67	0.0	0.08	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.06	0.99	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	1.65	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0		
14	0.0	0.18	0.0	0.0	0.64	0.59	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0		
17	0.52	0.0	0.0	1.30	0.47	0.0	0.0	0.0	0.0	0.0	0.75	0.0		
18	0.53	0.0	0.43	0.20	0.00	0.0	0.0	3.35	0.0	0.0	3.65	0.0		
19	3.03	0.0	0.0	0.0	0.0	0.41	0.0	0.24	0.0	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.17	0.0	1.44	0.0	0.0	0.0	0.0		
21	0.05	0.12	0.0	0.0	0.0	0.48	1.48	0.58	0.0	0.0	0.0	1.11		
22	0.08	0.39	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.0		
23	0.07	0.0	1.53	0.0	0.0	0.16	1.09	0.0	0.02	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.45	0.56	0.0	0.0	0.01	0.0	0.0	0.02		
25	0.0	0.0	0.0	0.0	0.87	0.0	0.0	0.0	0.0	0.0	0.0	0.94		
26	0.13	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.05	0.0	0.0		
27	0.59	0.0	0.0	0.10	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.47		
29	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.98		
30	1.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49		
31	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	1.06	0.0	0.0		
TOTAL	4.30	4.65	2.52	7.91	3.04	3.65	3.64	7.13	3.25	1.95	5.39	8.96		
STA AV	3.85	4.75	4.70	4.70	4.09	3.13	3.94	3.67	4.57	2.37	4.42	5.38		

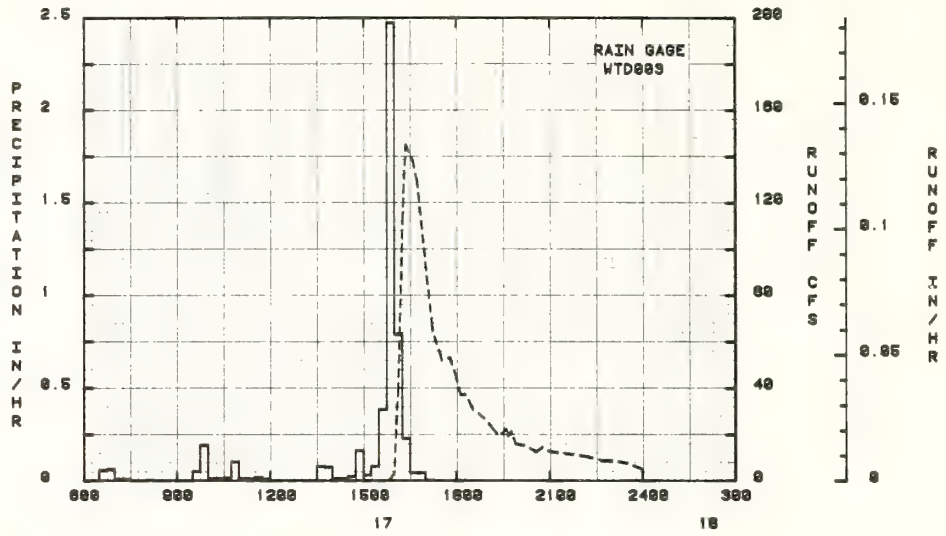
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 5, 6 and 7. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED W-28												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.240	14.056	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.177	35.931	0.0	0.0	0.0	0.0	0.195	0.0	0.0	0.0	0.0	0.0
3	0.115	1.344	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.152	0.683	0.0	3.732	0.0	0.0	0.0	0.0	6.726	0.0	0.0	0.0
5	0.307	0.597	0.0	1.970	0.0	0.0	0.0	0.0	0.454	0.0	0.0	0.0
6	0.245	1.516	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.221
7	0.032	0.331	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.224	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.149	0.0	18.435	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.149	0.0	12.685	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.107	0.0	0.225	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.090	0.0	0.087	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.101	0.0	6.454	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.087	0.0	0.886	0.206	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.087	0.0	0.087	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.087	0.0	0.043	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.087	0.0	11.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.029	0.087	0.0	2.049	0.0	0.0	0.0	7.377	0.0	0.0	3.214	0.0
19	0.0	0.087	0.0	0.839	0.0	0.0	0.0	0.020	0.0	0.0	0.006	0.0
20	0.0	0.087	0.0	0.523	0.0	0.0	0.0	12.319	0.0	0.0	0.0	0.0
21	0.0	0.087	0.0	0.489	0.0	0.0	6.206	0.489	0.0	0.0	0.0	0.0
22	0.0	0.087	0.0	0.489	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.043	1.832	0.394	0.0	0.0	1.715	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.110	0.331	0.0	0.090	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.363	0.529	0.0	0.0	0.0	0.0	0.0	0.0	0.014
26	0.0	0.0	0.0	0.301	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.110	0.0	0.0	0.194	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.058	0.0	0.0	0.132	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.687
29	0.0	0.0	0.0	0.057	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.486
30	8.444	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.229
31	0.256	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.110
MEAN	0.3280	2.0038	0.0626	2.0594	0.0237	0.0930	0.2618	0.6518	0.2393	0.0	0.1073	2.4112
INCHES	0.224	1.236	0.043	1.362	0.016	0.002	0.179	0.445	0.158	0.0	0.071	1.647
STA AV	0.361	0.532	0.441	0.342	0.174	0.044	0.124	0.224	0.217	0.090	0.216	0.430

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0220387. Quality of records: Poor, estimated to be within 20% of actual. STA AV based on 13 yr (1957-69) record period.

1969 SELECTED RUNOFF EVENT OXFORD, MISSISSIPPI WATERSHED W-28												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17, 1969												
RG WTD003			RG WTD003									
4-17	0.00	0.001	4-17	630	0.0	0.0	4-17	1114	0.110	0.0		
				645	0.0600	0.02		1446	0.060	0.0003		
				700	0.0640	0.03		1542	0.150	0.0004		
				715	0.0080	0.03		1552	0.640	0.0005		
				730	0.0080	0.03		1600	3.810	0.0008		
WATERSHED CONDITIONS: About 9% of area in cultivation, primarily cotton and corn, poor to fair cover; 27% pasture and idle land, fair to good cover; 62% in woods, good cover; 2% in bare gullies.				800	0.0	0.03		1608	42.030	0.0036		
				815	0.0040	0.04		1616	112.700	0.0131		
				830	0.0010	0.04		1622	145.000	0.0249		
				930	0.0	0.04		1636	138.200	0.0552		
				945	0.0520	0.05		1644	129.700	0.0716		
				1000	0.1920	0.10		1714	64.810	0.1163		
				1015	0.0114	0.10		1732	51.940	0.1324		
				1030	0.0114	0.10		1748	53.190	0.1453		
				1045	0.0160	0.11		1758	45.750	0.1529		
				1100	0.1040	0.13		1808	37.260	0.1593		
				1115	0.0124	0.14		1818	37.260	0.1650		
				1130	0.0124	0.14		1832	30.810	0.1723		
				1145	0.0198	0.14		1854	26.900	0.1820		
				1200	0.0080	0.15		1918	20.290	0.1907		
				1330	0.0	0.15		1930	20.290	0.1944		
				1345	0.0800	0.17		1934	22.150	0.1957		
				1400	0.0728	0.18		1940	19.380	0.1976		
				1415	0.0120	0.19		1946	21.210	0.1995		
				1430	0.0120	0.19		1954	16.000	0.2018		
				1445	0.0238	0.20		2010	15.240	0.2056		
				1500	0.1640	0.24		2028	13.120	0.2095		
				1515	0.0324	0.24		2034	12.460	0.2107		
				1530	0.0795	0.26		2046	14.500	0.2132		
				1545	0.3840	0.36		2102	12.460	0.2165		
				1600	2.4718	0.98		2132	11.820	0.2221		
				1615	0.7880	1.18		2210	10.590	0.2286		
				1630	0.2285	1.23		2242	8.810	0.2334		
				1645	0.0440	1.24		2300	8.810	0.2358		
				1700	0.0440	1.25		2330	7.660	0.2396		
				1715	0.0047	1.26		2400	5.070	0.2425		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0009183. Thiessen weighted storm rainfall, rain gages 5, 6 and 7. For 30-day antecedent P and Q, see table above and on previous page.



EVENT OF APRIL 17, 1969
OXFORD, MISSISSIPPI WATERSHED W-28

OXFORD, MISSISSIPPI WATERSHED W-32

LOCATION: Marshall Co., Miss.; 4.6 mi. E of Walhill on County road; Cuffawa Creek, Pigeon Roost Creek Watershed
Yazoo River Basin.

AREA: 20000.00 acres 31.30 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													OXFORD, MISSISSIPPI WATERSHED W-32	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P 4.84	5.13	2.61	9.10	2.64	2.98	1.53	7.40	2.14	1.64	6.10	9.53	55.64	
	Q 1.516	2.947	0.147	5.664	0.051	0.038	0.007	0.765	0.038	0.0	0.924	3.889	15.988	
STA AV	P 3.97	4.87	4.85	4.96	4.53	2.99	4.00	3.72	4.78	2.24	4.56	5.56	51.03	
	Q 1.228	1.741	1.780	1.360	0.965	0.140	0.356	0.372	0.508	0.128	0.743	1.576	10.896	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days	
	Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	12-28	0.297	12-28	0.292	12-28	0.563	2- 1	1.362	2- 1	2.003	4- 9	2.392	12-28	3.142
													1-30	4.131
MAXIMUMS FOR PERIOD OF RECORD														
	2-23	0.570	2-23	0.560	7- 9	0.960	12- 3	1.940	12- 3	2.450	12- 3	3.480	12- 3	3.720
	1962		1962		1967		1964		1964		1964		1964	1965

NOTES: Watershed conditions: About 30% in cultivation (cotton, corn and soybeans), fair cover November to March, poor cover April and May improving to good by mid-July; 32% in pasture and idle land, good cover April to October with fair cover remainder of year; 37% in woods, good cover; 1% in bare gullies. Percentages of total area in various land use categories are based on surveys made from 1967 to 1972. About 17% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.10-5. Monthly precipitation Thiessen weighted from 10 rain gages. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4W, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-32	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	2.36	0.0	0.0	0.0	0.03	0.0	0.0	0.02	0.22	0.0	0.0		
2	0.0	0.49	0.0	0.0	0.0	0.28	0.09	0.05	0.01	0.0	0.0	0.0		
3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.0		
4	0.0	0.0	0.0	1.79	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0		
5	0.0	0.10	0.0	0.45	0.0	0.0	0.07	0.0	0.15	0.0	0.0	0.0		
6	0.0	0.59	0.36	0.0	0.0	0.0	0.23	0.0	0.0	0.00	0.0	1.91		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.31	0.0	0.10		
8	0.01	0.03	0.11	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	2.72	0.0	0.21	0.0	0.03	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.33	0.0	0.59	0.0	0.39	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.06	1.29	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	1.99	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0		
14	0.0	0.26	0.0	0.0	0.07	0.95	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.00	0.0	0.0	0.0	0.01	0.0	0.0	0.60	0.0	0.0	0.0	0.0		
17	0.73	0.0	0.0	1.43	0.45	0.0	0.0	0.0	0.0	0.0	0.98	0.0		
18	0.72	0.0	0.55	0.23	0.02	0.0	0.11	3.74	0.0	0.0	3.82	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.29	0.0	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.61	0.0	0.0	0.0	0.0		
21	0.10	0.16	0.0	0.0	0.0	0.51	0.02	0.59	0.0	0.0	0.0	1.15		
22	0.06	0.28	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0		
23	0.04	0.0	1.34	0.0	0.0	0.12	0.67	0.0	0.07	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.78	0.27	0.0	0.0	0.01	0.0	0.0	0.06		
25	0.0	0.0	0.0	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0	1.11		
26	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0		
27	0.53	0.0	0.0	0.16	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.07	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	2.51		
29	0.0		0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.12		
30	1.86		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58		
31	0.62		0.0		0.0		0.0	0.09		0.95		0.0		
TOTAL	4.84	5.13	2.61	9.10	2.64	2.98	1.53	7.40	2.14	1.64	6.10	9.53		
STA AV	3.97	4.87	4.85	4.96	4.53	2.99	4.00	3.72	4.78	2.24	4.56	5.56		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 3, 10 thru 14, 20, 21, 24 and 26. STA AV based on 13 yr (1957-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					OXFORD, MISSISSIPPI					WATERSHED W-32	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	953.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	1222.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	27.3	0.1	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0
4	0.0	8.1	3.1	136.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
5	0.0	2.4	0.1	511.6	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0
6	0.0	108.3	0.1	52.6	0.0	0.0	0.0	0.0	0.9	0.0	0.0	195.0
7	0.0	17.7	0.1	2.5	0.0	0.0	0.0	0.0	18.0	0.0	0.0	18.0
8	0.0	5.5	0.0	2.4	0.0	0.0	0.0	0.0	4.5	0.0	0.0	4.3
9	0.0	0.5	0.0	1057.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5
10	0.0	0.0	0.0	1005.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
11	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	0.0	0.0	16.2	0.1
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0
13	0.0	0.0	0.0	939.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
14	0.0	0.0	0.0	170.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
15	0.0	86.2	0.0	11.8	0.0	32.2	0.0	0.0	0.0	0.0	0.1	0.0
16	0.0	32.1	0.0	0.2	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
17	0.0	6.4	0.0	676.3	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
18	73.3	0.5	0.0	139.5	0.0	0.0	0.0	277.1	0.0	0.0	652.0	0.0
19	15.3	0.2	0.0	24.9	0.0	0.0	0.0	17.3	0.0	0.0	95.3	0.0
20	2.2	0.2	0.0	6.6	0.0	0.0	0.0	299.5	0.0	0.0	4.3	0.0
21	0.0	0.2	0.0	1.5	0.0	0.0	0.0	39.5	0.0	0.0	0.7	30.6
22	0.0	2.4	0.0	0.4	0.0	0.0	0.0	6.8	0.0	0.0	0.0	9.1
23	0.0	0.9	89.5	0.1	0.0	0.0	5.0	0.5	0.0	0.0	0.0	3.0
24	0.0	0.2	33.4	0.0	7.3	0.0	0.8	0.1	0.0	0.0	0.0	1.0
25	0.0	0.2	0.1	0.0	35.9	0.0	0.0	0.0	0.0	0.0	0.0	298.2
26	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4
27	1.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
28	28.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	767.7
29	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1534.5
30	988.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.3
31	158.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3
MEAN	41.08	88.44	3.99	158.66	1.39	1.08	0.19	20.73	1.07	0.0	25.88	105.43
INCHES	1.516	2.947	0.147	5.664	0.051	0.038	0.007	0.765	0.038	0.0	0.924	3.889
STA AV	1.228	1.741	1.780	1.360	0.965	0.140	0.356	0.372	0.508	0.128	0.743	1.576

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0011901. Quality of records: Good, estimated to be within 10% of actual. STA AV based on 13 yr (1957-69) record period.

1969	SELECTED RUNOFF EVENT					OXFORD, MISSISSIPPI					WATERSHED W-32	
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF						
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17 - 18, 1969												
4-17	RG WTD010		4-17	RG WTD010			4-17					
	0.0	0.0		700	0.0	0.0		708	0.170	0.0		
				715	0.0040	0.00		1002	0.240	0.0		
				730	0.0071	0.00		1212	0.370	0.0		
				745	0.0680	0.02		1340	0.370	0.0		
				800	0.1000	0.04		1352	3.940	0.0		
WATERSHED CONDITIONS: About 30% of area in cultivation, primarily cotton, corn and soybeans, poor to fair cover; 32% in pasture and idle land, fair to good cover; 37% in woods, good cover; 1% in bare gullies.				815	0.0400	0.05		1400	12.580	0.0001		
				830	0.0204	0.06		1412	11.360	0.0002		
				845	0.0126	0.06		1428	10.760	0.0003		
				900	0.0080	0.06		1440	11.360	0.0004		
				915	0.0040	0.07		1450	20.280	0.0005		
				930	0.0040	0.07		1458	30.000	0.0007		
				945	0.0082	0.07		1512	28.840	0.0010		
				1000	0.0200	0.07		1522	27.770	0.0012		
				1015	0.0560	0.09		1534	40.020	0.0015		
				1030	0.0240	0.09		1540	78.490	0.0018		
				1045	0.0040	0.09		1550	326.100	0.0035		
				1300	0.0	0.09		1600	727.660	0.0079		
				1315	0.0048	0.10		1608	1032.660	0.0137		
				1330	0.2120	0.15		1618	1700.000	0.0250		
				1345	0.3561	0.24		1628	2760.000	0.0434		
				1400	0.0600	0.25		1642	3727.000	0.0809		
				1415	0.0200	0.26		1650	4185.980	0.1071		
				1430	0.1960	0.31		1702	4518.969	0.1503		
				1445	0.5000	0.43		1710	4671.969	0.1807		
				1500	0.1410	0.47		1728	4662.980	0.2501		
				1515	0.1680	0.51		1742	4446.980	0.3028		
				1530	0.7560	0.70		1756	4239.980	0.3530		
				1545	1.9320	1.18		1812	3942.990	0.4071		
				1600	0.4200	1.29		1824	3709.000	0.4450		
				1615	0.2767	1.35		1840	3421.000	0.4921		
				1630	0.1640	1.40		1856	2940.720	0.5342		
				1645	0.0400	1.41		1916	2470.000	0.5789		
				1700	0.0240	1.41		1932	2130.000	0.6093		
				1715	0.0200	1.42		2000	1680.000	0.6534		
				1730	0.0117	1.42		2026	1364.000	0.6861		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000496. Thiessen weighted storm rainfall, rain gages 3, 10 thru 14, 20, 21, 24 and 26. For 30-day antecedent P and Q, see table on pp. 62.010-1 and 62.010-2.

1969	SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI			WATERSHED W-32			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF APRIL 17 - 18, 1969 (CONTINUED)										
4-17			1745		0.0	1.42	4-17	2048	1122.560	0.7087
			1800		0.0	1.42		2102	1007.120	0.7210
								2114	864.260	0.7303
								2144	630.250	0.7488
								2200	564.750	0.7567
								2216	507.110	0.7638
								2240	450.640	0.7733
								2258	436.830	0.7799
								2328	485.810	0.7913
								2400	507.110	0.8044
							4-18	16	521.420	0.8112
								30	514.260	0.8172
								48	492.900	0.8247
								108	436.830	0.8324
								120	418.500	0.8366
								216	331.000	0.8539
								258	292.420	0.8647
								402	232.750	0.8786
								432	195.010	0.8839
								506	171.640	0.8891
								602	160.090	0.8968
								710	163.000	0.9059
								816	148.310	0.9144
								834	154.200	0.9167
								944	128.560	0.9249
								1102	108.000	0.9325
								1200	98.490	0.9374
								1328	82.810	0.9440
								1448	68.040	0.9490
								1518	68.040	0.9507
								1630	62.000	0.9546
								1800	50.340	0.9588
								2014	36.870	0.9636
								2218	36.870	0.9674
								2302	36.870	0.9687
								2400	36.870	0.9705

OXFORD, MISSISSIPPI WATERSHED W-34

LOCATION: Marshall Co., Miss.; 8 mi. S of Byhalia on County road; Pigeon Roost Creek, Yazoo River Basin.

AREA: 75000.00 acres 117.20 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														OXFORD, MISSISSIPPI				WATERSHED W-34			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual							
1969	P	4.60	4.68	2.42	9.07	2.61	2.60	2.63	7.73	2.88	1.60	5.93	8.73	55.48							
	Q	1.633	2.940	0.587	4.830	0.514	0.327	0.444	1.219	0.506	0.0	0.0	0.0	13.000							
STA AV	P	3.91	4.77	4.79	4.99	4.29	2.99	4.06	4.12	4.59	2.18	4.40	5.47	50.56							
	Q	1.458	1.869	1.932	1.584	1.141	0.472	0.714	0.721	0.780	0.435	0.973	1.589	13.668							
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																					
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days			
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.		
1969		4- 9	0.124	4- 9	0.123	4- 9	0.244	4- 9	0.695	4- 9	1.354	4- 9	2.132	4- 9	2.284	1-30	3.385				
MAXIMUMS FOR PERIOD OF RECORD																					
		7- 9	0.150	7- 9	0.150	7- 9	0.290	7- 9	0.800	7- 9	1.410	11-27	2.270	12- 3	2.720	3-24	4.770				
		1967		1967		1967		1967		1967		1968		1964		1965					

NOTES: Watershed conditions: About 23% in cultivation (cotton, corn and soybeans), fair cover November to March, poor cover April and May improving to good by mid-July; 29% in pasture and idle land, good cover April to October with fair cover remainder of year; 46% in woods, good cover; 1% in bare gullies; 1% urban. Percentages of total area in various land use categories are based on surveys made from 1965 to 1971. About 17% of area, principally in upper reaches above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.11-4. Monthly precipitation Thiessen weighted from 32 rain gages. Monthly values of runoff include small amounts of flow through auxiliary Station 34-A. Precipitation and runoff records began Jan. 1957. Runoff for period Oct., Nov., and Dec. 1969 discontinued, due to dredging in the channel. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4N, Mississippi.

1969 DAILY PRECIPITATION (inches)														OXFORD, MISSISSIPPI WATERSHED W-34													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	2.14	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.08	0.23	0.0	0.0	2	0.0	0.39	0.0	0.0	0.0	0.26	0.25	0.20	0.09	0.0	0.0	0.0	
2	0.0	0.39	0.0	0.0	0.0	0.0	0.26	0.25	0.20	0.09	0.0	0.0	0.0	3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.0	0.0	0.0	0.0	
3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.0	0.0	0.0	4	0.0	0.0	0.0	1.56	0.0	0.0	0.0	0.0	1.44	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	1.56	0.0	0.0	0.0	0.0	1.44	0.0	0.0	0.0	5	0.0	0.10	0.0	0.32	0.0	0.0	0.07	0.0	0.16	0.0	0.0	0.0	
5	0.0	0.10	0.0	0.0	0.32	0.0	0.0	0.07	0.0	0.16	0.0	0.0	0.0	6	0.0	0.56	0.30	0.0	0.0	0.0	0.12	0.0	0.0	0.00	0.0	1.76	
6	0.0	0.56	0.30	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.00	0.0	1.76	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.26	0.0	0.11	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.26	0.0	0.11	8	0.03	0.05	0.10	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.03	0.05	0.10	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9	0.0	0.0	0.0	3.32	0.0	0.24	0.0	0.19	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	3.32	0.0	0.24	0.0	0.19	0.0	0.0	0.0	0.0	10	0.0	0.0	0.0	0.28	0.0	0.50	0.0	0.19	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.28	0.0	0.50	0.0	0.19	0.0	0.0	0.0	0.0	11	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.09	1.15	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.09	1.15	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	13	0.0	0.0	0.0	1.76	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	
13	0.0	0.0	0.0	1.76	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	14	0.0	0.20	0.0	0.0	0.13	0.44	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.20	0.0	0.0	0.13	0.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	0.01	0.0	0.0	0.0	0.00	0.0	0.0	0.89	0.0	0.0	0.0	0.0	
16	0.01	0.0	0.0	0.0	0.00	0.0	0.0	0.89	0.0	0.0	0.0	0.0	0.0	17	0.62	0.0	0.0	1.45	0.45	0.0	0.0	0.00	0.0	0.0	0.88	0.0	
17	0.62	0.0	0.0	1.45	0.45	0.0	0.0	0.00	0.0	0.0	0.0	0.88	0.0	18	0.64	0.0	0.52	0.23	0.02	0.0	0.11	3.52	0.0	0.0	3.89	0.0	
18	0.64	0.0	0.52	0.23	0.02	0.0	0.11	3.52	0.0	0.0	0.0	3.89	0.0	19	0.00	0.0	0.0	0.0	0.0	0.09	0.06	0.23	0.01	0.0	0.0	0.0	
19	0.00	0.0	0.0	0.0	0.0	0.0	0.09	0.06	0.23	0.01	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.04	0.0	1.59	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	1.59	0.0	0.0	0.0	0.0	21	0.06	0.14	0.0	0.0	0.0	0.45	0.17	0.75	0.0	0.0	0.0	1.16	
21	0.06	0.14	0.0	0.0	0.0	0.0	0.45	0.17	0.75	0.0	0.0	0.0	1.16	22	0.07	0.30	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	
22	0.07	0.30	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	23	0.09	0.0	1.30	0.0	0.0	0.07	1.43	0.0	0.09	0.0	0.0	0.0	
23	0.09	0.0	1.30	0.0	0.0	0.0	0.07	1.43	0.0	0.09	0.0	0.0	0.0	24	0.0	0.0	0.0	0.0	0.66	0.40	0.0	0.0	0.01	0.0	0.0	0.04	
24	0.0	0.0	0.0	0.0	0.66	0.40	0.0	0.0	0.01	0.0	0.0	0.0	0.04	25	0.0	0.0	0.0	0.0	0.71	0.0	0.0	0.0	0.0	0.0	0.0	0.95	
25	0.0	0.0	0.0	0.0	0.71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95	26	0.14	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.05	0.0	0.0	
26	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.05	0.0	0.0	27	0.45	0.0	0.0	0.16	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	
27	0.45	0.0	0.0	0.16	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	28	0.0	0.06	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	2.18	
28	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	2.18	29	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.94	
29	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.94	30	1.82	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.58	
30	1.82	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.58	0.58	31	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.91	0.0	0.0	
31	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.91	0.0	0.0	0.0	TOTAL	4.60	4.68	2.42	9.07	2.61	2.60	2.63	7.73	2.88	1.60	5.93	8.73	
														STA AV	3.91	4.77	4.79	4.99	4.29	2.99	4.06	4.12	4.59	2.18	4.40	5.47	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 1 thru 31 and 33. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED W-34												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	50.28	2125.9	53.9	39.1	51.8	34.0	36.2	29.6	35.1	0.0	0.0	0.0
2	49.4	4447.0	53.9	39.7	52.6	34.0	35.9	30.7	40.4	0.0	0.0	0.0
3	52.0	299.8	46.7	40.3	50.9	33.3	34.7	30.6	43.8	0.0	0.0	0.0
4	52.8	95.7	38.9	58.8	50.0	32.9	35.0	29.5	349.7	0.0	0.0	0.0
5	50.1	61.1	38.9	1189.2	50.0	32.6	35.0	30.2	251.6	0.0	0.0	0.0
6	50.2	516.3	39.2	199.0	47.4	32.6	34.7	31.3	39.4	0.0	0.0	0.0
7	53.0	146.2	39.1	60.6	46.6	33.6	34.7	31.4	74.2	0.0	0.0	0.0
8	54.8	86.5	39.6	45.1	57.5	33.9	34.7	31.4	45.0	0.0	0.0	0.0
9	51.2	66.1	39.1	3408.6	61.8	35.0	34.7	31.4	34.0	0.0	0.0	0.0
10	49.4	52.6	38.9	3689.3	54.4	35.4	34.7	31.0	32.6	0.0	0.0	0.0
11	50.3	48.0	38.9	222.9	53.5	33.9	34.4	30.3	32.2	0.0	0.0	0.0
12	51.2	43.9	38.9	108.4	51.7	33.3	33.1	29.5	31.9	0.0	0.0	0.0
13	52.9	42.3	38.9	1746.5	49.1	33.3	32.1	29.5	32.2	0.0	0.0	0.0
14	53.8	45.5	38.3	919.6	48.2	33.6	31.7	30.2	32.2	0.0	0.0	0.0
15	54.7	358.4	38.9	137.8	47.4	56.5	31.3	30.2	31.9	0.0	0.0	0.0
16	55.6	200.1	38.9	85.8	47.4	31.5	30.6	43.7	31.9	0.0	0.0	0.0
17	73.3	72.1	38.9	1775.0	54.5	30.5	30.3	34.6	31.9	0.0	0.0	0.0
18	318.5	47.9	54.8	655.0	54.5	30.8	29.6	837.3	31.9	0.0	0.0	0.0
19	178.2	41.9	50.3	151.2	49.1	31.2	28.5	262.3	31.9	0.0	0.0	0.0
20	56.3	43.2	37.7	89.8	47.4	31.9	28.5	939.1	31.9	0.0	0.0	0.0
21	39.9	42.5	36.6	77.1	44.9	34.0	28.8	601.7	31.9	0.0	0.0	0.0
22	40.4	72.9	36.1	66.1	46.5	34.7	35.0	99.8	32.2	0.0	0.0	0.0
23	75.9	67.1	375.1	55.6	46.5	33.3	383.4	34.1	33.3	0.0	0.0	0.0
24	50.7	48.5	274.2	52.8	67.0	34.4	72.4	30.9	34.0	0.0	0.0	0.0
25	39.4	41.1	54.4	52.8	182.2	35.4	33.1	29.4	33.3	0.0	0.0	0.0
26	40.0	46.0	40.7	51.0	42.3	34.3	31.7	179.5	32.6	0.0	0.0	0.0
27	51.6	53.1	37.3	51.0	33.3	33.6	32.5	178.8	32.6	0.0	0.0	0.0
28	170.1	53.9	36.3	51.8	32.0	35.2	31.8	27.9	32.6	0.0	0.0	0.0
29	67.5		38.2	50.0	32.3	36.2	31.0	27.6	33.3	0.0	0.0	0.0
30	2429.6		39.7	50.0	33.0	35.4	29.9	26.9	34.3	0.0	0.0	0.0
31	681.8		39.1		33.6		29.2	29.4		0.0		0.0
MEAN	165.96	330.90	59.69	507.32	52.23	34.33	45.14	123.86	53.19	0.0	0.0	0.0
INCHES	1.633	2.940	0.587	4.830	0.514	0.327	0.444	1.219	0.506	0.0	0.0	0.0
STA AV	1.458	1.869	1.932	1.584	1.141	0.472	0.714	0.721	0.780	0.435	0.973	1.589

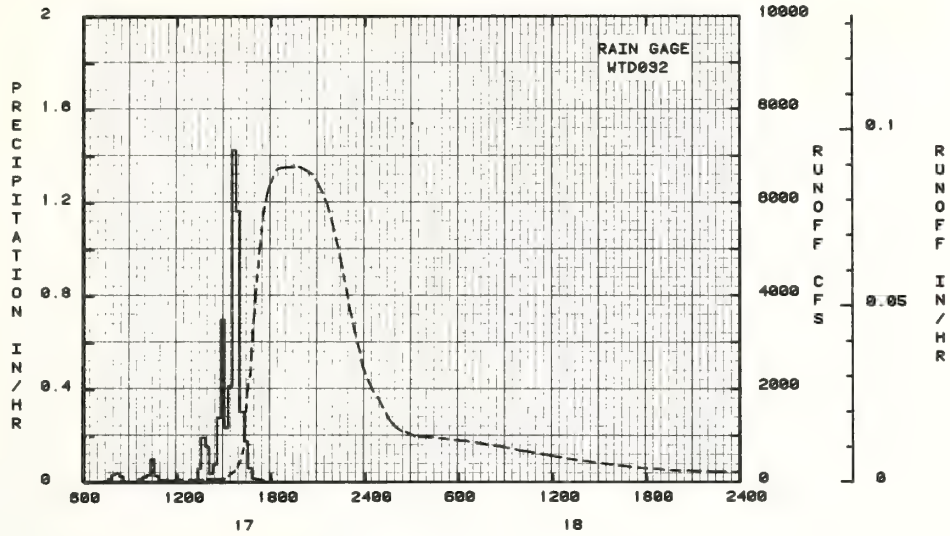
NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.00031736. Quality of records: Good, estimated to be within 10% of actual. Daily discharge values include relatively insignificant flow through auxiliary station 34-A. Runoff for period Oct., Nov., and Dec. 1969 discontinued, due to dredging in the channel. STA AV based on 13 yr (1957-69) record period. Part-year amounts are included in station averages.

1969 SELECTED RUNOFF EVENT OXFORD, MISSISSIPPI WATERSHED W-34												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17 - 18, 1969												
RG WTD032			RG WTD032									
4-17	0.0	0.010	4-17	630	0.0	0.0	4-17	1048	69.270	0.0		
						645	0.0040	0.00	1122	73.180	0.0005	
						700	0.0	0.00	1336	77.090	0.0027	
						715	0.0033	0.00	1358	81.030	0.0031	
						730	0.0046	0.00	1400	81.030	0.0031	
WATERSHED CONDITIONS:						745	0.0199	0.01	1446	81.030	0.0039	
About 23% of area in cultivation, primarily cotton,						800	0.0365	0.02	1500	99.260	0.0042	
corn and soybeans, poor to						815	0.0440	0.03	1520	171.920	0.0048	
fair cover; 29% in pasture and						830	0.0283	0.03	1522	183.420	0.0049	
idle land, fair to good cover;						845	0.0080	0.04	1540	264.530	0.0058	
46% in woods, good cover; 1%						900	0.0047	0.04	1552	370.040	0.0066	
in bare gullies; 1% urban.						915	0.0041	0.04	1600	465.210	0.0073	
						930	0.0045	0.04	1602	488.440	0.0075	
						945	0.0200	0.04	1608	636.380	0.0082	
						1000	0.0280	0.05	1614	744.240	0.0091	
						1015	0.0354	0.06	1620	1391.860	0.0105	
						1030	0.1033	0.09	1626	1887.730	0.0127	
						1045	0.0316	0.09	1632	2130.600	0.0154	
						1100	0.0087	0.10	1640	2334.430	0.0193	
						1115	0.0	0.10	1644	2745.340	0.0215	
						1130	0.0	0.10	1648	3287.260	0.0242	
						1145	0.0120	0.10	1656	3724.080	0.0304	
						1200	0.0048	0.10	1700	4019.330	0.0338	
						1215	0.0040	0.10	1702	4166.422	0.0356	
						1230	0.0003	0.10	1716	5039.488	0.0498	
						1300	0.0	0.10	1730	5775.578	0.0665	
						1315	0.0040	0.10	1742	6152.211	0.0823	
						1330	0.0640	0.12	1752	6374.422	0.0961	
						1345	0.1960	0.17	1800	6475.180	0.1074	
						1400	0.1560	0.21	1808	6574.109	0.1189	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00001322. Thiessen weighted storm rainfall, rain gages 1 thru 31 and 33. For 30-day antecedent P and Q, see table on pp. 62.011-1 and 62.011-2.

1969			SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI			WATERSHED W-34		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF APRIL 17 - 18, 1969 (CONTINUED)											
4-17			1415		0.0400	0.22	4-17	1822	6727.949	0.1394	
			1430		0.0800	0.24		1836	6760.809	0.1602	
			1445		0.2798	0.31		1852	6771.648	0.1841	
			1500		0.7003	0.48		1928	6782.289	0.2379	
			1515		0.2350	0.54		1946	6782.109	0.2648	
			1530		0.4161	0.64		2000	6737.969	0.2857	
			1545		1.4286	1.00		2014	6697.219	0.3064	
			1600		1.1640	1.29		2036	6625.309	0.3387	
			1615		0.3040	1.37		2054	6464.480	0.3647	
			1630		0.1770	1.41		2116	6216.570	0.3954	
			1645		0.0631	1.43		2134	5956.750	0.4195	
			1700		0.0200	1.43		2150	5642.809	0.4399	
			1715		0.0160	1.44		2200	5395.770	0.4521	
			1730		0.0116	1.44		2216	5043.250	0.4705	
			1745		0.0040	1.44		2232	4610.750	0.4875	
			1800		0.0040	1.44		2248	4108.250	0.5029	
			1815		0.0001	1.44		2302	3695.330	0.5149	
								2318	3284.540	0.5272	
								2332	2958.340	0.5368	
								2340	2777.080	0.5419	
								2348	2523.200	0.5466	
								2400	2340.940	0.5530	
							4-18	16	2120.750	0.5609	
								32	1948.570	0.5681	
								50	1807.860	0.5756	
								108	1609.840	0.5824	
								132	1351.880	0.5902	
								148	1235.700	0.5948	
								200	1174.450	0.5980	
								204	1154.330	0.5990	
								218	1110.030	0.6025	
								238	1074.810	0.6073	
								252	1038.040	0.6106	
								310	990.340	0.6146	
								336	972.950	0.6202	
								400	968.460	0.6253	
								406	967.850	0.6266	
								416	962.700	0.6287	
								458	934.080	0.6375	
								516	928.270	0.6412	
								554	904.540	0.6489	
								600	900.660	0.6501	
								638	878.480	0.6575	
								722	836.650	0.6658	
								818	784.440	0.6758	
								910	733.020	0.6845	
								950	690.180	0.6908	
								1000	680.180	0.6923	
								1046	635.330	0.6990	
								1138	584.510	0.7060	
								1230	532.950	0.7124	
								1330	478.210	0.7191	
								1400	455.930	0.7222	
								1440	426.380	0.7261	
								1546	371.220	0.7319	
								1700	330.820	0.7376	
								1800	295.470	0.7417	
								1906	266.960	0.7458	
								2000	245.320	0.7488	
								2008	242.260	0.7492	
								2100	239.990	0.7520	
								2200	229.120	0.7551	
								2212	226.930	0.7557	
								2304	219.240	0.7583	
								2400	214.420	0.7610	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00001322. Thiessen weighted storm rainfall, rain gages 1 thru 31 and 33. For 30-day antecedent P and Q, see table on pp. 62.011-1 and 62.011-2.



EVENT OF APRIL 17 - 18, 1969
 OXFORD, MISSISSIPPI WATERSHED W-34

OXFORD, MISSISSIPPI WATERSHED W-35

LOCATION: Marshall Co., Miss.; 0.3 mi. W of Chulahoma on State Highway No. 4; Cuffawa Creek, Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 7550.00 acres 11.80 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													OXFORD, MISSISSIPPI WATERSHED W-35	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	4.67	5.22	2.64	9.21	2.13	3.30	0.89	7.05	2.34	1.70	5.59	9.62	54.37
	Q	1.302	2.595	0.177	5.572	0.0	0.078	0.0	0.536	0.013	0.0	0.492	4.554	15.319
STA AV	P	3.89	4.82	4.86	4.90	4.61	3.02	3.89	3.48	4.98	2.20	4.44	5.49	50.59
	Q	1.412	1.809	1.862	1.390	0.990	0.137	0.330	0.312	0.517	0.102	0.694	1.616	11.169
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		2 Days		8 Days		
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	Date	Vol.	Date	Vol.	Date
1969		12-29	0.577	4- 9	0.375	12-28	0.713	12-28	1.578	12-28	2.017	12-28	2.922	12-28
														3.784
														12-23
														4.366
MAXIMUMS FOR PERIOD OF RECORD														
		5-26	0.880	5-26	0.840	5-26	1.480	2-23	2.190	5- 6	2.710	12- 3	3.090	12-28
		1963		1963		1963		1962		1967		1964		1969
														3.784
														3-24
														5.690
														1965

NOTES: Watershed conditions: About 31% in cultivation (cotton, corn and soybeans), fair cover November to March, poor cover April and May improving to good by mid-July; 31% in pasture and idle land; good cover April to October with fair cover remainder of year; 37% in woods, good cover; 1% in bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1971. About 22% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.12-5. Monthly precipitation Thiessen weighted from 5 rain gages. Precipitation and runoff records began Jan. 1957. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4N, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-35	
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	2.43	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.21	0.0	0.0	
2	0.0	0.51	0.0	0.0	0.0	0.0	0.30	0.05	0.07	0.01	0.0	0.0	0.0	
3	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	2.06	0.0	0.0	0.0	0.0	0.97	0.0	0.0	0.0	
5	0.0	0.10	0.0	0.0	0.54	0.0	0.0	0.02	0.0	0.14	0.0	0.0	0.0	
6	0.0	0.60	0.37	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.00	0.0	1.88	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.86	0.33	0.0	0.09	
8	0.01	0.04	0.10	0.0	0.0	0.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	2.60	0.0	0.24	0.0	0.00	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.39	0.0	0.58	0.0	0.55	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.08	0.99	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	1.97	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	
14	0.0	0.28	0.0	0.0	0.0	0.04	1.35	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.38	0.0	0.0	0.0	0.0	
17	0.69	0.0	0.0	0.0	1.27	0.43	0.0	0.0	0.0	0.0	0.0	0.95	0.0	
18	0.77	0.0	0.60	0.23	0.02	0.0	0.11	3.65	0.0	0.0	3.65	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.36	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	1.39	0.0	0.0	0.0	0.0	
21	0.10	0.17	0.0	0.0	0.0	0.0	0.58	0.05	0.60	0.0	0.0	0.0	1.12	
22	0.05	0.29	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	
23	0.01	0.0	1.29	0.0	0.0	0.0	0.12	0.24	0.0	0.04	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.46	0.08	0.0	0.0	0.02	0.0	0.0	0.06	
25	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.0	0.0	1.15	
26	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	
27	0.56	0.0	0.0	0.16	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	
28	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	2.70	
29	0.0	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.08	
30	1.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	
31	0.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.97	0.0	0.0	0.0	
TOTAL		4.67	5.22	2.64	9.21	2.13	3.30	0.89	7.05	2.34	1.70	5.59	9.62	
STA AV		3.89	4.82	4.86	4.90	4.61	3.02	3.89	3.48	4.98	2.20	4.44	5.49	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 10, 11, 20, 21 and 24. STA AV based on 13 yr (1957-69) record period.

1969 MEAN DAILY DISCHARGE (cfs)							OXFORD, MISSISSIPPI WATERSHED W-35					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	361.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	409.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	1.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	129.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	227.97	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0
6	0.0	32.25	0.01	11.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.07
7	0.0	0.19	0.0	0.22	0.0	0.0	0.0	0.0	3.81	0.0	0.0	3.02
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	385.77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	350.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	2.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	346.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	58.46	0.0	14.74	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	17.43	0.0	0.79	0.0	10.11	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.21	0.0	0.0	214.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	34.43	0.0	0.01	33.20	0.0	0.0	0.0	107.13	0.0	0.0	135.02	0.0
19	1.19	0.0	0.0	4.97	0.0	0.0	0.0	0.83	0.0	0.0	21.11	0.0
20	0.0	0.0	0.0	0.85	0.0	0.0	0.0	61.08	0.0	0.0	0.0	0.0
21	0.01	0.0	0.0	0.04	0.0	0.0	0.0	0.87	0.0	0.0	0.0	8.93
22	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.08	0.0	43.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	13.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.87
26	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23
27	1.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	4.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	385.80
29	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	649.46
30	315.87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	195.50
31	54.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.84
MEAN	13.323	29.393	1.813	58.917	0.0	0.828	0.0	5.481	0.136	0.0	5.204	46.603
INCHES	1.302	2.595	0.177	5.572	0.0	0.078	0.0	0.536	0.013	0.0	0.492	4.554
STA AV	1.412	1.809	1.862	1.390	0.990	0.137	0.330	0.312	0.517	0.102	0.694	1.616

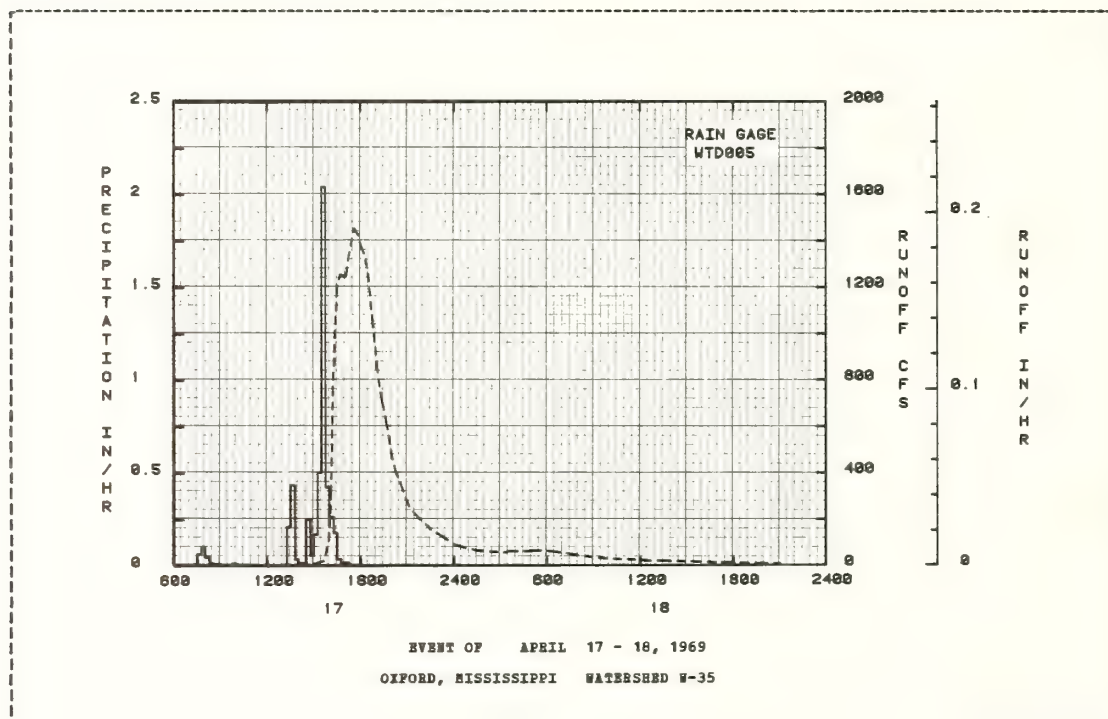
NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0031526. Quality of records: Fair, estimated to be within 15% of actual. STA AV based on 13 yr (1957-69) record period.

1969 SELECTED RUNOFF EVENT							OXFORD, MISSISSIPPI WATERSHED W-35					
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17 - 18, 1969												
RG WTD005												
4-17	0.0	0.0	4-17	700	0.0	0.0	4-17	1446	0.0	0.0		
				715	0.0040	0.00		1450	0.440	0.0		
				730	0.0120	0.00		1502	10.300	0.0001		
				745	0.0674	0.02		1518	16.700	0.0006		
				800	0.1074	0.05		1538	23.000	0.0015		
WATERSHED CONDITIONS:												
About 31% of area in cultivation, primarily cotton, corn and soybeans, poor to fair cover; 31% in pasture and idle land, fair to good cover; 37% in woods, good cover; 1% in bare gullies.												
				815	0.0485	0.06		1558	112.620	0.0045		
				830	0.0167	0.06		1606	316.980	0.0083		
				845	0.0124	0.07		1614	775.000	0.0179		
				900	0.0120	0.07		1630	1210.000	0.0527		
				915	0.0049	0.07		1642	1258.000	0.0851		
				930	0.0049	0.07		1650	1252.000	0.1071		
				945	0.0080	0.07		1658	1246.000	0.1290		
				1000	0.0160	0.08		1706	1258.000	0.1509		
				1015	0.0089	0.08		1718	1354.000	0.1852		
				1030	0.0047	0.08		1736	1456.000	0.2406		
				1300	0.0	0.08		1752	1426.000	0.2911		
				1315	0.0078	0.08		1802	1384.000	0.3219		
				1330	0.2125	0.14		1814	1348.000	0.3578		
				1345	0.4368	0.24		1830	1258.000	0.4035		
				1400	0.0360	0.25		1846	1060.000	0.4441		
				1415	0.0161	0.26		1904	865.000	0.4820		
				1430	0.0161	0.26		1920	730.000	0.5099		
				1445	0.2523	0.32		1930	675.000	0.5253		
				1500	0.0563	0.34		1944	590.000	0.5447		
				1515	0.1720	0.38		1958	489.950	0.5613		
				1530	0.5072	0.51		2014	412.840	0.5771		
				1545	2.0440	1.02		2044	320.990	0.6012		
				1600	0.4240	1.13		2106	257.450	0.6151		
				1615	0.2641	1.19		2130	223.000	0.6277		
				1630	0.1800	1.24		2150	199.570	0.6369		
				1645	0.0357	1.25		2230	158.100	0.6526		
				1700	0.0200	1.25		2314	127.440	0.6663		
				1715	0.0200	1.26		2400	92.150	0.6774		
							4-18	44	76.870	0.6855		
								130	65.800	0.6927		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0001314. Thiessen weighted storm rainfall, rain gages 10, 11, 20, 21 and 24. For 30-day antecedent P and Q, see table on pp. 62.012-1 and 62.012-2.

1969	SELECTED RUNOFF EVENT					OXFORD, MISSISSIPPI			WATERSHED W-35		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF APRIL 17 - 18, 1969 (CONTINUED)											
							4-18	152	62.600	0.6958	
								246	59.400	0.7030	
								314	57.800	0.7066	
								330	62.600	0.7087	
								346	62.600	0.7109	
								406	62.600	0.7136	
								444	62.600	0.7188	
								536	67.400	0.7262	
								622	61.000	0.7327	
								732	49.660	0.7412	
								924	32.370	0.7513	
								1212	23.000	0.7615	
								1330	20.200	0.7652	
								1554	15.290	0.7708	
								1804	11.680	0.7746	
								2010	7.750	0.7773	
								2100	7.130	0.7781	

NOTES: To convert runoff in CPS to IN/HR, multiply by 0.0001314. Thiessen weighted storm rainfall, rain gages 10, 11, 20, 21 and 24. For 30-day antecedent P and Q, see table on pp. 62.012-1 and 62.012-2.



OXFORD, MISSISSIPPI WATERSHED W-17A

LOCATION: Marshall Co., Miss.; 7.8 mi. SW of Holly Springs on County road; Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 3200.00 acres 5.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										OXFORD, MISSISSIPPI				WATERSHED W-17A			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	4.31	4.33	2.30	9.10	1.77	1.64	2.41	8.65	3.62	1.50	5.85	8.07	53.56			
	Q	0.677	2.489	0.066	4.844	0.0	0.0	0.005	0.667	0.262	0.0	0.413	2.337	11.760			
STA AV	P	3.57	4.44	4.81	5.04	3.89	2.49	4.39	4.76	4.24	2.05	3.72	5.42	48.83			
	Q	0.731	1.349	1.408	1.083	0.552	0.050	0.342	0.406	0.451	0.081	0.385	0.988	7.825			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		4- 9	0.261	4- 9	0.260	4- 9	0.515	4- 9	1.406	4- 9	2.177	4- 9	3.240	4- 9	3.536	4- 9	4.287
MAXIMUMS FOR PERIOD OF RECORD																	
		7- 9	0.490	7- 9	0.490	7- 9	0.960	7- 9	2.570	7- 9	3.510	7- 9	3.650	7- 9	3.660	4- 9	4.287
		1967		1967		1967		1967		1967		1967		1967		1969	

NOTES: Watershed conditions: About 14% of area in cultivation (cotton, soybeans and corn), fair cover November to March, poor cover April and May improving to good by mid-July; 17% in pasture and idle land, good cover April to October with fair cover remainder of year; 68% in woods, good cover; 1% in bare gullies. Percentages of total area in various land use categories and are based on the latest survey completed in 1970. About 38% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.5-5. Monthly precipitation Thiessen weighted from rain gages 2, 17, 22 and 28. Precipitation and runoff records began Jan. 1957; but station averages were computed starting with 1958. Maximum discharges and volumes were not computed prior to 1961; poor records 1958-60. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4W, Mississippi.

1969 DAILY PRECIPITATION (inches)													OXFORD, MISSISSIPPI WATERSHED W-17A												
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
	1	0.0	1.92	0.0	0.0	0.0	0.05	0.0	0.0	0.36	0.22	0.0	0.0												
	2	0.0	0.33	0.0	0.0	0.0	0.21	0.31	0.58	0.02	0.0	0.0	0.0												
	3	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.0												
	4	0.0	0.0	0.0	1.20	0.0	0.0	0.0	0.0	2.12	0.0	0.0	0.0												
	5	0.0	0.10	0.0	0.18	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0												
	6	0.0	0.52	0.28	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.0	1.61												
	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.17	0.0	0.0	0.12												
	8	0.04	0.07	0.10	0.0	0.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	9	0.0	0.0	0.0	4.05	0.0	0.32	0.0	0.35	0.0	0.0	0.0	0.0												
	10	0.0	0.0	0.0	0.25	0.0	0.23	0.0	0.01	0.0	0.0	0.0	0.0												
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.16	0.96	0.0												
	12	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0												
	13	0.0	0.0	0.0	1.64	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0												
	14	0.0	0.15	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0												
	15	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	16	0.01	0.0	0.0	0.0	0.0	0.0	0.0	1.11	0.0	0.0	0.0	0.0												
	17	0.57	0.0	0.0	1.40	0.44	0.0	0.0	0.0	0.0	0.0	0.85	0.0												
	18	0.55	0.0	0.52	0.22	0.0	0.0	0.16	3.67	0.0	0.0	4.04	0.0												
	19	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.18	0.0	0.0	0.0	0.0												
	20	0.0	0.0	0.0	0.0	0.0	0.02	0.0	1.34	0.0	0.0	0.0	0.0												
	21	0.01	0.10	0.0	0.0	0.0	0.38	0.02	1.34	0.0	0.0	0.0	1.15												
	22	0.07	0.35	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0												
	23	0.11	0.0	1.25	0.0	0.0	0.00	1.33	0.0	0.04	0.0	0.0	0.0												
	24	0.0	0.0	0.0	0.0	0.32	0.38	0.0	0.0	0.00	0.0	0.0	0.01												
	25	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0	0.0	0.0	0.0	0.85												
	26	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0												
	27	0.33	0.0	0.0	0.15	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0												
	28	0.0	0.06	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	1.86												
	29	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.89												
	30	1.76	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.59												
	31	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.85	0.0	0.0												
TOTAL		4.31	4.33	2.30	9.10	1.77	1.64	2.41	8.65	3.62	1.50	5.85	8.07												
STA AV		3.57	4.44	4.81	5.04	3.89	2.49	4.39	4.76	4.24	2.05	3.72	5.42												

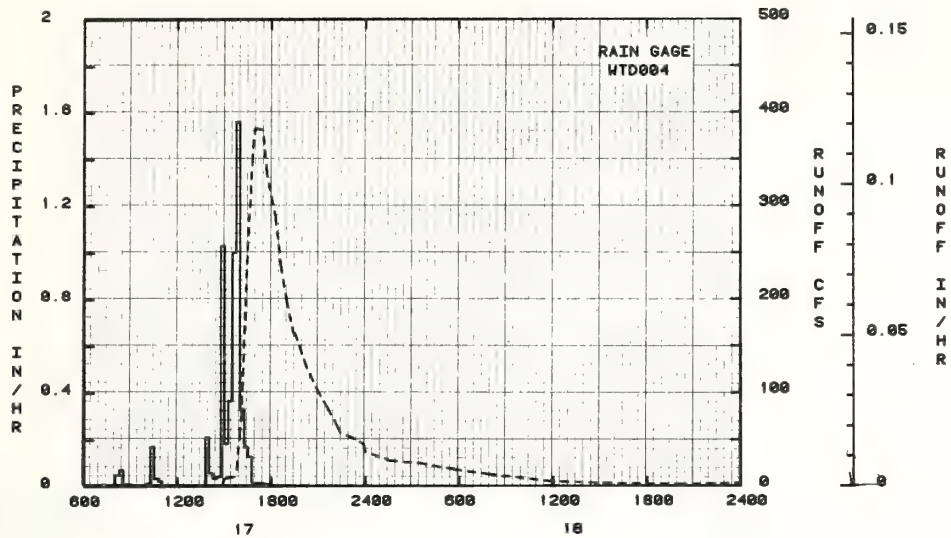
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 2, 17, 22 and 28. STA AV based on 12 yr (1958-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					OXFORD, MISSISSIPPI WATERSHED W-17A						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	90.73	0.13	0.04	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.08
2	0.0	211.90	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08
3	0.0	3.33	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08
4	0.0	2.37	0.18	0.23	0.0	0.0	0.0	0.0	29.84	0.0	0.0	0.08
5	0.0	1.72	0.18	2.74	0.0	0.0	0.0	0.0	5.34	0.0	0.0	0.08
6	0.0	6.40	0.18	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.64
7	0.0	2.18	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.79
8	0.0	1.31	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10
9	0.0	1.00	0.18	250.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10
10	0.0	1.00	0.18	222.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10
11	0.0	0.84	0.18	3.40	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.05
12	0.0	0.70	0.18	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0
13	0.0	0.52	0.18	63.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.46	0.18	28.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	3.11	0.18	5.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	1.89	0.18	2.84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	1.06	0.18	57.89	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0
18	0.0	0.57	0.18	10.52	0.0	0.0	0.0	28.52	0.0	0.0	42.01	0.0
19	0.0	0.41	0.18	2.03	0.0	0.0	0.0	1.07	0.0	0.0	10.39	0.0
20	0.0	0.26	0.18	0.40	0.0	0.0	0.0	27.02	0.0	0.0	1.31	0.0
21	0.0	0.20	0.18	0.18	0.0	0.0	0.0	31.11	0.0	0.0	0.52	1.48
22	0.0	0.89	0.14	0.13	0.0	0.0	0.0	1.95	0.0	0.0	0.35	0.27
23	0.0	0.74	3.67	0.04	0.0	0.0	0.72	0.0	0.0	0.0	0.26	0.12
24	0.0	0.35	0.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.08
25	0.0	0.24	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	4.81
26	0.0	0.18	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.13
27	0.0	0.18	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.08
28	0.0	0.14	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	42.04
29	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	174.59
30	70.31	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	66.07
31	20.67	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.34
MEAN	2.935	11.952	0.287	21.709	0.0	0.0	0.023	2.893	1.173	0.0	1.851	10.134
INCHES	0.677	2.489	0.066	4.844	0.0	0.0	0.005	0.667	0.262	0.0	0.413	2.337
STA AV	0.731	1.349	1.408	1.083	0.552	0.050	0.342	0.406	0.451	0.081	0.385	0.988

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.007438. Quality of records: Poor, estimated to be within 20% of actual. STA AV based on 12 yr (1958-69) record period.

1969	SELECTED RUNOFF EVENT			OXFORD, MISSISSIPPI			WATERSHED W-17A			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 17 - 18, 1969										
RG WTD004			RG WTD004							
4-17	0.0	0.012	4-17	730	0.0	0.0	4-17	1452	2.650	0.0
				745	0.0037	0.00		1458	7.600	0.0002
				800	0.0037	0.00		1506	9.590	0.0006
				815	0.0514	0.01		1522	9.590	0.0014
				830	0.0729	0.03		1538	11.020	0.0023
WATERSHED CONDITIONS:				845	0.0120	0.04		1548	20.320	0.0031
About 14% of area in culti-				900	0.0120	0.04		1558	55.330	0.0051
vation, primarily cotton,				1000	0.0	0.04		1604	74.160	0.0071
soybeans and corn, poor to				1015	0.0160	0.04		1630	262.000	0.0297
fair cover; 17% in pasture				1030	0.1720	0.09		1648	356.000	0.0584
and idle land, fair to										
good cover; 68% in woods,				1045	0.0357	0.09		1656	384.000	0.0737
good cover; 1% in bare				1100	0.0240	0.10		1726	382.000	0.1330
gullies.				1345	0.0	0.10		1744	332.000	0.1662
				1400	0.2115	0.15		1806	302.000	0.2022
				1415	0.0563	0.17		1816	288.000	0.2174
				1430	0.0359	0.18		1836	236.000	0.2445
				1445	0.0440	0.19		1858	199.100	0.2692
				1500	1.0320	0.45		1924	163.750	0.2936
				1515	0.1840	0.49		1930	163.750	0.2987
				1530	0.3680	0.58		2016	126.490	0.3332
				1545	1.0040	0.83		2054	103.310	0.3558
				1600	1.5639	1.23		2134	83.790	0.3751
				1615	0.3324	1.31		2224	57.550	0.3934
				1630	0.1689	1.35		2316	51.000	0.4080
				1645	0.1282	1.38		2354	44.950	0.4174
				1700	0.0160	1.39		2400	36.950	0.4187
				1715	0.0160	1.39	4-18	134	27.280	0.4343
				1730	0.0160	1.39		328	24.590	0.4496
				1745	0.0120	1.40		540	17.870	0.4641
				1800	0.0	1.40		818	11.750	0.4762
				1815	0.0	1.40		1204	4.820	0.4859
								1544	3.020	0.4904
								2002	1.990	0.4937
								2400	3.430	0.4970

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0003099. Thiessen weighted storm rainfall, rain gages 2, 17; 22 and 28. For 30-day antecedent P and Q, see table above and on previous page.



EVENT OF APRIL 17 - 18, 1969
OXFORD, MISSISSIPPI WATERSHED W-17A

OXFORD, MISSISSIPPI WATERSHED W-35A

LOCATION: Marshall Co., Miss.; 0.3 mi. W of Chulahoma on State Highway No. 4; Cuffawa Creek, Pigeon Roost Creek Watershed, Yazoo River Basin.

AREA: 1090.00 acres 1.70 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														OXFORD, MISSISSIPPI				WATERSHED W-35A			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual							
1969	P	4.80	5.04	2.62	9.02	2.36	2.98	1.25	6.74	1.86	1.56	5.96	9.53	53.74							
	Q	1.958	3.546	0.463	4.961	0.026	0.074	0.0	0.645	0.019	0.0	0.777	4.152	16.620							
STA AV	P	3.59	4.64	4.98	4.71	4.29	2.70	4.11	3.59	4.45	2.06	4.06	5.55	48.72							
	Q	1.554	1.943	2.234	1.385	1.032	0.130	0.492	0.471	0.487	0.116	0.662	1.794	12.302							
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																					
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval													
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days							
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.						
1969		4-10	0.455	4-10	0.414	12-28	0.711	2- 1	1.424	2- 1	1.832	12-28	2.293	12-28	3.065						
															4.097						
MAXIMUMS FOR PERIOD OF RECORD																					
		7- 9	1.300	7- 9	1.270	7- 9	2.390	7- 9	3.240	7- 9	3.280	11-27	3.710	11-27	3.800						
		1967		1967		1967		1967		1967		1968		1968	1965						

NOTES: Watershed conditions: About 24% in cultivation (cotton, soybeans and corn), fair cover November to March, poor cover April and May improving to good by mid-July; 45% in pasture and idle land, good cover April to October with fair cover remainder of year; 30% in woods, good cover; 1% in bare gullies. Percentages of total area in various land use categories are based on the latest survey completed in 1971. About 6% of drainage area above small desilting and retention dams. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 62.12-5. Monthly precipitation Thiessen weighted from rain gages 3, 11, 24 and 26. Precipitation and runoff records began Jan. 1957; but station averages were computed starting with 1958. Maximum discharges and volumes were not computed prior to 1961; poor records 1957-60. For long-time precipitation records, see U.S. Weather Bureau Station records at Holly Springs, 4N, Mississippi.

1969 DAILY PRECIPITATION (inches)														OXFORD, MISSISSIPPI WATERSHED W-35A			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
1	0.0	2.31	0.0	0.0	0.0	0.03	0.0	0.0	0.00	0.20	0.0	0.0					
2	0.0	0.52	0.0	0.0	0.0	0.29	0.08	0.06	0.02	0.0	0.0	0.0					
3	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.0	0.0	0.0					
4	0.0	0.0	0.0	1.66	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.0					
5	0.0	0.10	0.0	0.45	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0					
6	0.0	0.57	0.39	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	1.97					
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.71	0.31	0.0	0.09					
8	0.01	0.02	0.10	0.0	0.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
9	0.0	0.0	0.0	2.49	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0					
10	0.0	0.0	0.0	0.35	0.0	0.56	0.0	0.44	0.0	0.0	0.0	0.0					
11	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.03	1.24	0.0					
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
13	0.0	0.0	0.0	2.23	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0					
14	0.0	0.29	0.0	0.0	0.02	1.07	0.0	0.0	0.0	0.0	0.0	0.0					
15	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
16	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.46	0.0	0.0	0.0	0.0					
17	0.77	0.0	0.0	1.46	0.43	0.0	0.0	0.0	0.0	0.0	0.99	0.0					
18	0.67	0.0	0.52	0.22	0.03	0.0	0.07	3.75	0.0	0.0	3.74	0.0					
19	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.31	0.0	0.0	0.0	0.0					
20	0.0	0.0	0.0	0.0	0.0	0.01	0.0	1.21	0.0	0.0	0.0	0.0					
21	0.11	0.16	0.0	0.0	0.0	0.44	0.03	0.51	0.0	0.0	0.0	1.12					
22	0.06	0.27	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0					
23	0.03	0.0	1.38	0.0	0.0	0.14	0.35	0.0	0.05	0.0	0.0	0.0					
24	0.0	0.0	0.0	0.0	0.77	0.22	0.0	0.0	0.02	0.0	0.0	0.06					
25	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.0	0.0	1.13					
26	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0					
27	0.55	0.0	0.0	0.16	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0					
28	0.0	0.06	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	2.56					
29	0.0	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.04					
30	1.84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56					
31	0.59	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.92	0.0	0.0					
TOTAL	4.80	5.04	2.62	9.02	2.36	2.98	1.25	6.74	1.86	1.56	5.96	9.53					
STA AV	3.59	4.64	4.98	4.71	4.29	2.70	4.11	3.59	4.45	2.06	4.06	5.55					

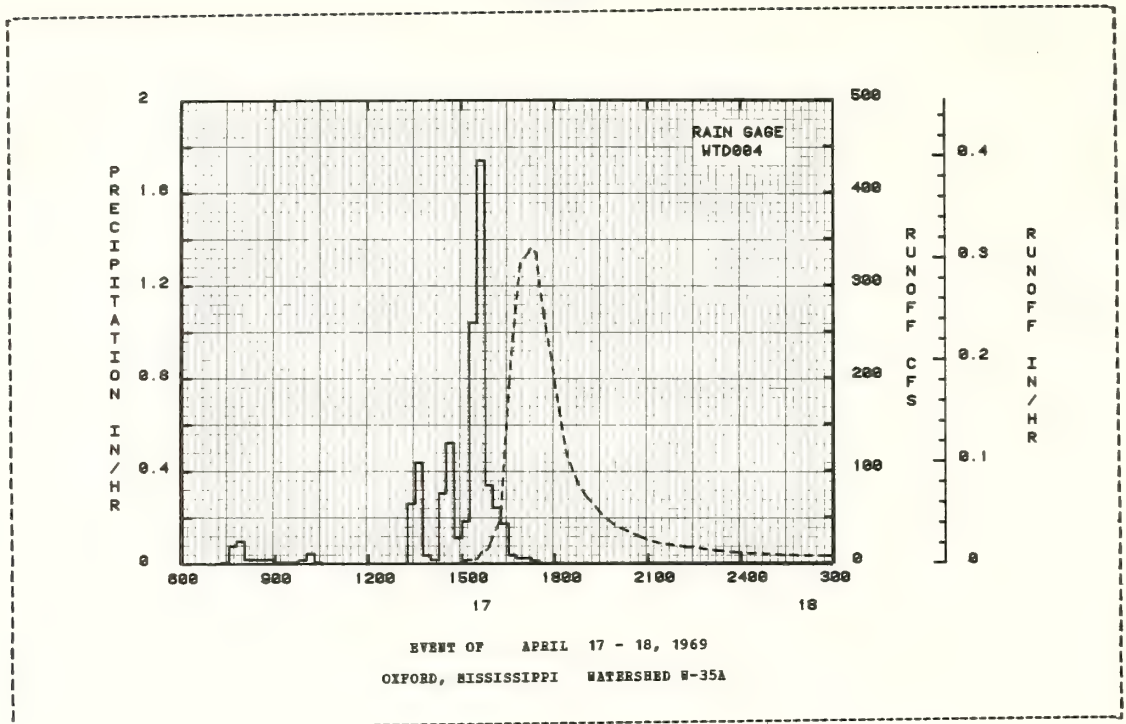
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-4C, (p. 62.001-1). Daily precipitation values Thiessen weighted from rain gages 3, 11, 24 and 26. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) OXFORD, MISSISSIPPI WATERSHED W-35A												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	52.710	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.170	57.978	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.267	2.501	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.097	1.610	0.0	6.974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.037	1.487	0.0	18.365	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.208	10.408	4.210	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.320
7	0.170	2.624	0.566	1.259	0.0	0.0	0.0	0.0	0.849	0.0	0.0	2.988
8	0.170	1.733	0.037	1.021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.566
9	0.170	1.367	0.037	36.640	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	1.367	0.0	45.671	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	1.138	0.0	2.363	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.806	0.0	1.610	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.521	0.0	50.656	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.607	0.0	7.878	0.0	2.471	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	9.990	0.0	3.437	0.0	0.913	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	4.265	0.0	3.149	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	1.718	1.733	0.0	32.361	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	9.959	1.250	0.703	5.331	0.0	0.0	0.0	14.571	0.0	0.0	30.558	0.0
19	2.636	1.021	0.566	2.258	0.0	0.0	0.0	1.110	0.0	0.0	5.014	0.0
20	1.259	1.021	0.0	1.250	0.0	0.0	0.0	11.876	0.0	0.0	0.0	0.0
21	0.910	1.250	0.0	1.133	0.0	0.0	0.0	1.925	0.0	0.0	0.0	5.848
22	1.021	1.610	0.0	0.917	0.0	0.0	0.0	0.067	0.0	0.0	0.0	1.655
23	0.917	1.493	11.509	0.521	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.351
24	0.606	1.021	4.273	0.170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.352	0.625	1.059	0.0	1.176	0.0	0.0	0.0	0.0	0.0	0.0	17.971
26	0.271	0.208	0.255	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.401
27	1.598	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.388
28	4.377	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.487
29	1.610		0.352	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.868
30	50.227		0.455	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.054
31	10.916		0.0		0.0		0.0	0.0		0.0		1.259
MEAN	2.8925	5.7994	0.6846	7.5725	0.0379	0.1128	0.0	0.9532	0.0283	0.0	1.1857	6.1341
INCHES	1.958	3.546	0.463	4.961	0.026	0.074	0.0	0.645	0.019	0.0	0.777	4.152
STA AV	1.554	1.943	2.234	1.385	1.032	0.130	0.492	0.471	0.487	0.116	0.662	1.794

NOTES: To convert discharge in CFS to IN/DAY, multiply by 0.0218365. Quality of records: Fair, estimated to be within 15% of actual. STA AV based on 12 yr (1958-69) record period.

1969 SELECTED RUNOFF EVENT OXFORD, MISSISSIPPI WATERSHED W-35A												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF APRIL 17 - 18, 1969												
RG WTD004			RG WTD004									
4-17	0.0	0.045	4-17	715	0.0	0.0	4-17	1500	3.430	0.0		
				730	0.0080	0.00		1518	4.340	0.0011		
				745	0.0800	0.02		1530	5.700	0.0020		
				800	0.1000	0.05		1538	12.900	0.0031		
				815	0.0195	0.05		1550	15.700	0.0057		
WATERSHED CONDITIONS:				830	0.0200	0.06		1600	29.290	0.0091		
About 24% of area in cultivation, primarily cotton, soybeans and corn, poor to fair cover; 45% in pasture and idle land, fair to good cover; 30% in woods, good cover; 1% in bare gullies.				845	0.0200	0.06		1614	46.890	0.0172		
				900	0.0194	0.07		1624	129.350	0.0306		
				915	0.0074	0.07		1632	194.930	0.0503		
				930	0.0074	0.07		1640	248.000	0.0772		
				945	0.0074	0.07		1654	323.940	0.1379		
				1000	0.0163	0.08		1714	339.520	0.2385		
				1015	0.0445	0.09		1724	335.000	0.2897		
				1030	0.0080	0.09		1738	271.160	0.3541		
				1045	0.0003	0.09		1754	218.930	0.4135		
				1315	0.0	0.09		1808	166.220	0.4544		
				1330	0.2600	0.15		1824	114.470	0.4884		
				1345	0.4359	0.26		1846	84.680	0.5216		
				1400	0.0360	0.27		1900	72.080	0.5382		
				1415	0.0157	0.28		1930	52.950	0.5666		
				1430	0.3046	0.35		1954	41.190	0.5837		
				1445	0.5198	0.48		2020	34.150	0.5986		
				1500	0.1084	0.51		2056	25.520	0.6149		
				1515	0.1840	0.56		2122	21.320	0.6241		
				1530	1.0400	0.82		2212	17.480	0.6388		
				1545	1.7400	1.25		2312	13.450	0.6529		
				1600	0.3360	1.33		2400	10.810	0.6617		
				1615	0.2400	1.39		4-18	136	8.030	0.6754	
				1630	0.1720	1.44			254	7.210	0.6844	
				1645	0.0356	1.45			404	7.610	0.6923	
				1700	0.0240	1.45						
				1715	0.0240	1.46						
				1730	0.0120	1.46						
				1745	0.0003	1.46						
				1800	0.0003	1.46						

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0009099. Thiessen weighted storm rainfall, rain gages 3, 11, 24 and 26. For 30-day antecedent P and Q, see table above and on previous page.



TOMBSTONE, ARIZONA WATERSHED W-1

LOCATION: Cochise County, Arizona; 5.6 miles W of Tombstone; Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 36900.00 acres 57.66 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														TOMBSTONE, ARIZONA WATERSHED W-1																				
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																				
1969	P	0.37	0.46	0.17	0.01	0.39	0.01	3.87	3.04	1.19	0.14	0.40	0.47	10.52																				
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.049	0.003	0.0	0.0	0.0	0.077																				
STA AV	P	0.50	0.92	0.75	0.16	0.19	0.01	3.63	3.88	0.83	0.08	0.40	0.54	11.90																				
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.022	0.052	0.004	0.0	0.0	0.0	0.078																				
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																																		
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days												
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.							
1969		8- 7	0.045	8- 7	0.023	8- 7	0.025	8- 7	0.026	8- 7	0.026	8- 6	0.034	8-11	0.034	8- 5	0.048																	
MAXIMUMS FOR PERIOD OF RECORD																																		
		7-22	0.130	7-22	0.080	9- 9	0.130	9- 9	0.160	9- 9	0.190	9- 9	0.190	9- 8	0.230	9- 8	0.310																	
		1964		1964		1964		1964		1964		1964		1964		1964																		

NOTES: Watershed Conditions: 65% of area in desert shrubs (whitethorn, creosotebush and tarbush) with 25% cover and 2% grass cover. 35% is grassland with approximately 20% grass cover (crown spread) and 5% shrub cover. For topography, geological and vegetation maps, see pages 63.1-3, 63.1-4, and 63.1-5, respectively, of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226. Precipitation data: records began January 1954. Monthly totals are Thiessen weighted averages of 90 gages. Station averages are based on 1968-69 data. Runoff Data: Records began April 1964, station averages are based on 1966, 68 and 69 data. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY AIR TEMPERATURE (degrees F)														TOMBSTONE, ARIZONA WATERSHED W-1													
Day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec														
		max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min														
1		60 37	54 24	61 37	82 56	84 50	93 66	102 76	98 66	88 63	88 62	74 44	61 36														
2		67 37	60 29	57 30	81 55	82 49	91 64	100 66	98 70	91 65	83 60	70 40	62 41														
3		64 40	61 33	68 33	76 53	79 52	90 60	100 70	102 68	89 66	82 60	71 40	56 44														
4		54 33	61 39	52 31	79 44	68 50	91 59	102 72	102 71	88 66	78 60	74 45	46 42														
5		65 31	57 42	49 28	82 49	50 42	92 63	99 72	100 71	90 64	80 50	75 45	51 40														
6		75 37	60 36	60 29	78 49	55 36	97 62	95 71	91 66	92 68	83 51	73 47	48 29														
7		75 43	52 34	44 31	77 44	79 37	92 64	96 68	91 64	91 66	84 57	70 48	54 32														
8		72 46	56 29	51 26	78 45	77 47	91 56	89 68	93 65	92 71	88 62	70 45	54 29														
9		67 48	66 37	59 31	78 51	82 51	91 64	84 66	93 65	93 68	84 56	72 48	54 38														
10		57 42	70 39	59 31	74 52	86 54	84 60	91 66	95 67	92 71	82 58	70 53	56 42														
11		68 42	71 41	52 33	61 39	84 53	83 50	82 64	93 69	87 65	77 58	70 49	60 34														
12		70 47	61 45	56 26	76 40	83 52	87 56	88 66	90 66	84 62	72 43	69 51	66 36														
13		70 46	49 44	60 31	80 48	82 55	89 58	96 66	87 65	80 62	76 50	62 48	71 45														
14		56 52	56 37	44 28	82 50	85 57	94 59	101 72	92 63	74 58	80 52	74 43	70 45														
15		58 44	62 38	48 22	75 52	85 56	95 63	95 68	96 65	76 58	77 50	69 44	70 42														
16		58 39	59 38	61 29	68 44	86 55	90 68	87 66	98 67	83 58	82 50	63 47	73 48														
17		60 36	61 33	71 35	73 43	90 56	90 61	91 66	93 66	84 57	83 53	61 43	72 51														
18		62 38	60 46	75 41	80 45	94 62	92 60	86 64	95 67	84 56	73 58	50 31	72 46														
19		57 45	51 32	76 45	76 46	94 62	96 61	90 66	98 66	86 62	68 46	51 30	71 45														
20		64 41	52 30	73 46	86 50	92 62	98 65	94 68	96 67	84 60	72 51	58 30	68 42														
21		64 41	54 28	72 52	89 56	90 58	95 64	95 67	95 69	81 60	63 50	65 38	73 44														
22		60 43	57 33	53 43	86 54	92 62	93 58	89 67	94 70	85 58	66 42	70 40	70 45														
23		57 37	50 24	65 32	83 46	91 60	95 62	92 67	94 73	91 58	70 40	63 35	68 42														
24		62 36	67 35	65 39	86 50	91 58	91 63	84 67	91 65	91 60	78 51	62 36	68 38														
25		65 44	70 40	69 38	78 44	93 60	91 61	88 69	93 68	91 59	79 48	62 39	70 42														
26		68 44	67 42	72 39	70 42	95 61	93 62	83 66	89 67	90 64	78 50	64 41	68 45														
27		64 46	66 36	76 43	76 40	96 62	98 61	89 66	92 63	89 65	71 48	56 41	52 34														
28		55 46	62 42	77 43	83 50	98 65	103 65	84 61	91 67	88 64	75 47	48 33	36 35														
29		52 33		81 47	84 50	100 65	105 69	92 68	92 64	90 60	70 47	47 36	40 29														
30		54 25		84 50	82 48	98 70	105 70	97 69	91 63	92 63	69 40	56 36	43 27														
31		57 29		86 52		95 65		98 70	91 63		72 44		46 24														
AV.		62 40	59 36	63 36	78 47	85 55	93 61	92 67	94 66	87 62	76 51	64 41	60 39														
MEAN		51.4	47.9	50.0	63.3	70.7	77.5	80.0	80.4	74.9	64.2	53.1	49.7														
STA AV		58 35	59 35	66 40	74 45	84 53	90 61	92 67	89 65	84 60	79 52	66 43	58 36														

NOTES: STA AV values are based on 6 yr (1964-1969) record period.

1969 DAILY PRECIPITATION (inches) TOMBSTONE, ARIZONA WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.15E	0.02	0.02	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.01E	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	0.12E	0.0	0.0	0.15E
4	0.0	0.00E	0.0	0.0	0.13E	0.0	0.0	0.03	0.13E	0.0	0.0	0.04E
5	0.0	0.07E	0.0	0.0	0.19E	0.01	0.0	0.50E	0.01	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.38E	0.00	0.0	0.0	0.0
7	0.0	0.04E	0.13E	0.0	0.0	0.0	0.0	0.25E	0.06	0.0	0.00	0.0
8	0.0	0.00E	0.0	0.0	0.0	0.0	0.01E	0.03E	0.00	0.0	0.0	0.00
9	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.00	0.0	0.27E	0.0	0.0	0.0	0.03	0.0
11	0.0	0.0	0.0	0.01	0.01	0.0	0.01	0.0	0.04E	0.0	0.0	0.00
12	0.0	0.0	0.0	0.0	0.00	0.00	0.16E	0.14	0.0	0.0	0.0	0.0
13	0.0	0.30E	0.0	0.0	0.01	0.0	0.0	0.54E	0.19E	0.0	0.0	0.0
14	0.36E	0.02E	0.00	0.0	0.0	0.0	0.09	0.01E	0.10E	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.52E	0.0	0.09E	0.0
16	0.0	0.0	0.0	0.0	0.0	0.00	0.07E	0.0	0.0	0.0	0.27E	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.51E	0.0	0.0	0.0	0.00	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
19	0.0	0.01E	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
20	0.00	0.01E	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0
21	0.00E	0.01E	0.0	0.0	0.0	0.0	0.54E	0.0	0.0	0.13	0.0	0.0
22	0.0	0.00E	0.05	0.0	0.0	0.0	0.12	0.02	0.0	0.0	0.0	0.0
23	0.0	0.01E	0.0	0.0	0.0	0.0	0.30E	0.15	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.33	0.0	0.0	0.0	0.0
25	0.01E	0.0	0.0	0.0	0.0	0.0	0.28E	0.07	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.19E	0.20E	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	0.0	0.00	0.0	0.13E
28	0.0	0.0	0.0	0.0	0.0	0.0	0.86E	0.07	0.0	0.01E	0.00	0.15E
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.00	0.01E
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.00
31	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.0	0.0	0.0	0.0
TOTAL	0.37	0.46	0.17	0.01	0.39	0.01	3.87	3.04	1.19	0.14	0.40	0.47
STA AV	0.50	0.92	0.75	0.16	0.19	0.01	3.63	3.88	0.83	0.08	0.40	0.54

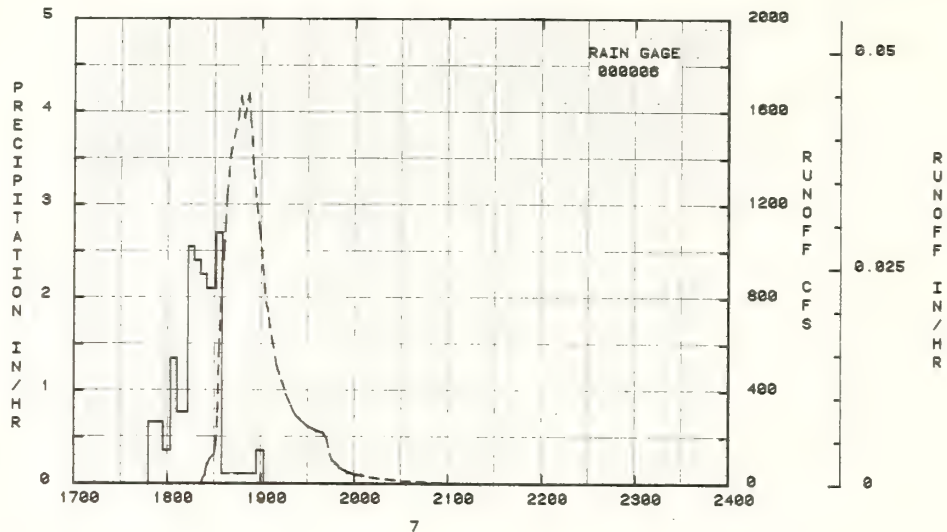
NOTES: Data are Thiessen weighted averages of values from 90 gages. STA AV are for 2 yr only (1968-69).

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.120	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.228	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.847	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.730E	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.230E	2.931	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.826	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	8.636E	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	1.335E	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	13.463	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	11.814E	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.372	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	3.311E	0.078	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.977	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	1.2753	2.4277	0.1702	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.049	0.003	0.0	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.022	0.052	0.004	0.0	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000645. STA AV are for 3 yr only (1966, 68 and 69). Previously published data are being reevaluated.

1969 SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA WATERSHED W-1							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF AUGUST 7, 1969										
RG 000006			RG 000006							
8- 7	0.06	0.0	8- 7	1748	0.0	0.0	8- 7	1820	0.0	0.0
				1757	0.6666	0.10		1821	2.03	0.0
				1802	0.3600	0.13		1822	8.42	0.0
				1806	1.3500	0.22		1823	26.74	0.0
				1813	0.7714	0.31		1824	40.39	0.0
WATERSHED CONDITIONS: 65% of area in desert shrubs (Whitethorn, creosotebush and tarbush) with 23% cover and 2% grass cover. 35% is in grassland with approximately 20% grass cover (crown spread) and 5% shrub cover.				1817	2.5500	0.48		1825	74.49	0.0
				1821	2.4000	0.64		1827	107.90	0.0001
				1825	2.2500	0.79		1830	129.35	0.0003
				1831	2.0999	1.00		1831	166.52	0.0004
				1835	2.7000	1.18		1832	306.75	0.0005
				1846	0.1091	1.20		1833	580.13	0.0007
				1857	0.1091	1.22		1834	759.79	0.0011
				1902	0.3600	1.25		1835	882.57	0.0014
				2033	0.0066	1.26		1836	1005.46	0.0018
								1837	1113.61	0.0022
								1838	1242.04	0.0028
								1840	1407.99	0.0039
								1845	1571.77	0.0073
								1847	1669.24	0.0087
								1849	1571.77	0.0102
								1852	1678.90	0.0122
								1853	1571.77	0.0131
								1855	1351.22	0.0143
								1857	1202.59	0.0155
								1859	1088.98	0.0165
								1901	937.18	0.0175
								1903	779.45	0.0182
								1905	712.00	0.0189
								1907	622.20	0.0195
								1910	508.99	0.0203
								1913	443.61	0.0210
								1916	383.78	0.0216
								1919	335.09	0.0221
								1922	295.85	0.0225
								1925	274.78	0.0229
								1930	245.00	0.0235
								1935	228.43	0.0240
								1940	217.62	0.0245
								1942	196.58	0.0247
								1944	124.95	0.0248
								1946	99.73	0.0249
								1948	87.92	0.0250
								1950	69.22	0.0251
								1955	51.03	0.0252
								2000	40.39	0.0253
								2010	27.96	0.0255
								2020	19.01	0.0256
								2030	12.72	0.0257
								2040	7.80	0.0257
								2050	4.61	0.0257
								2100	2.65	0.0257
								2115	0.70	0.0257
								2140	0.0	0.0257

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000269.



EVENT OF AUGUST 7, 1969
TOMBSTONE, ARIZONA WATERSHED W-1

1969 SELECTED RUNOFF EVENT

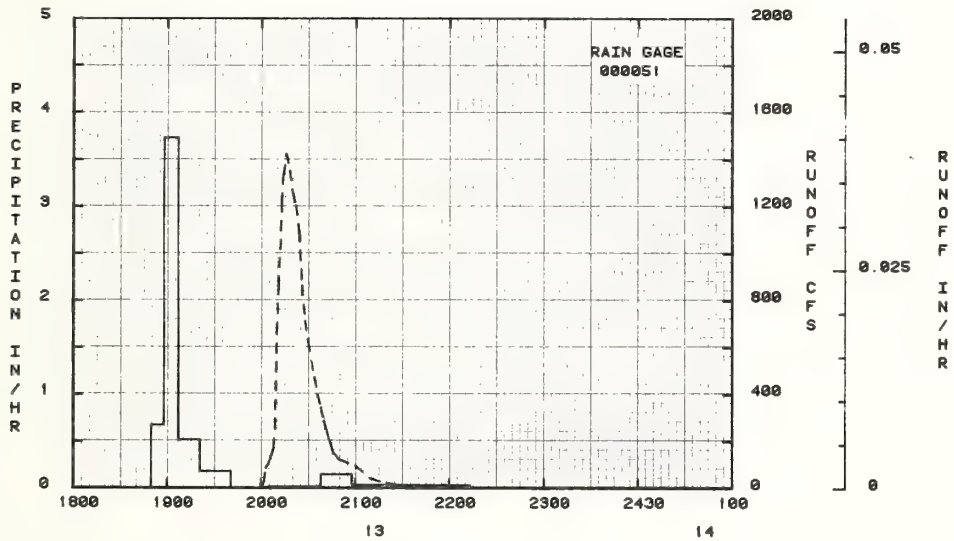
TOMBSTONE, ARIZONA WATERSHED W-1

ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)
									Acc.
									(inches)
EVENT OF AUGUST 13, 1969									
RG 000051			RG 000051						
8-13	0.0	0.0	8-13	1850	0.0	0.0	8-13	2000	0.0
				1858	0.6750	0.09		2001	5.08
				1907	3.7335	0.65		2002	26.74
				1921	0.5143	0.77		2003	87.92
				1941	0.1800	0.83		2005	105.84
				2005	0.0	0.83		2007	147.51
				2038	0.0182	0.84		2008	171.40
				2058	0.1500	0.89		2009	254.69
				2213	0.0320	0.93		2010	666.15
								2011	861.30
WATERSHED CONDITIONS:									
65% of area in desert shrubs									
(Whitethorn, creosotebush and									
tarbush) with 23% cover and									
2% grass cover. 35% is in									
grassland with approximately									
20% grass cover (crown									
spread) and 5% shrub cover.									
								2012	1017.13
								2013	1215.65
								2014	1337.25
								2016	1422.41
								2018	1351.22
								2020	1255.38
								2022	1202.59
								2024	1088.98
								2026	861.30
								2028	712.00
								2030	622.20
								2032	539.89
								2034	471.97
								2036	396.61
								2038	340.95
								2040	285.19
								2042	236.66
								2044	191.45
								2046	152.18
								2050	120.60
								2100	95.73
								2110	38.88
								2120	21.07
								2130	12.72
								2145	6.63

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000269.

1969			TOMBSTONE, ARIZONA WATERSHED W-1							
SELECTED RUNOFF EVENT										
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF AUGUST 13, 1969 (CONTINUED)										
							8-13	2200	3.76	0.0142
								2230	1.27	0.0142
								2300	0.22	0.0142
								2340	0.0	0.0142

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000269.

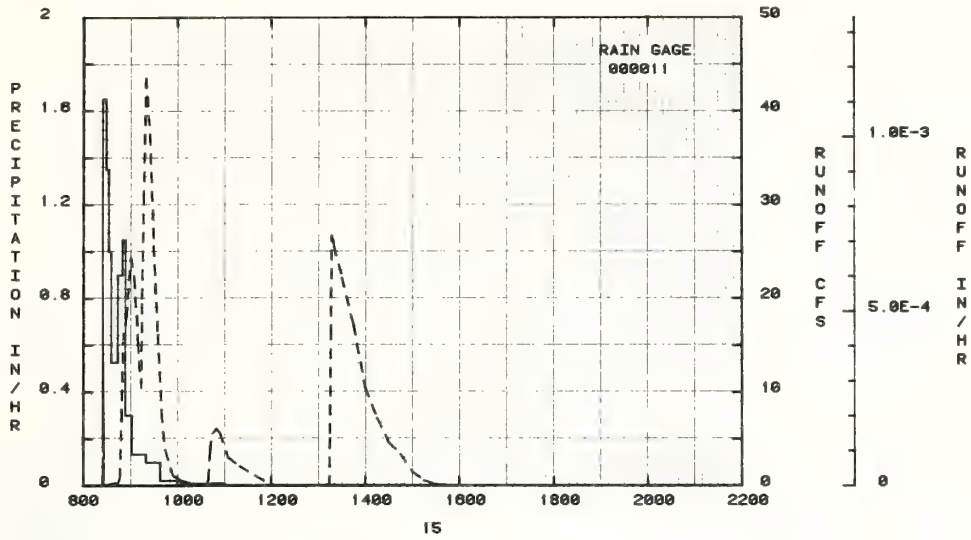


EVENT OF AUGUST 13, 1969

TOMBSTONE, ARIZONA WATERSHED W-1

1969 SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA WATERSHED W-1							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 15, 1969										
RG 000011			RG 000011							
9-15	0.0	0.0	9-15	825	0.0	0.0	9-15	825	0.0	0.0
				829	1.6500	0.11		835	0.22	0.0
				833	1.3500	0.20		845	0.32	0.0
				836	1.0000	0.25		847	0.87	0.0
				844	0.5250	0.32		849	7.20	0.0
WATERSHED CONDITIONS: 65% of area in desert shrubs (Whitethorn, creosotebush and tarbush) with 23% cover and 2% grass cover. 35% is in grassland with approximately 20% grass cover (crown spread) and 5% shrub cover.				850	0.9000	0.41		851	15.24	0.0
				854	1.0500	0.48		855	18.02	0.0
				902	0.3000	0.52		901	24.38	0.0001
				920	0.1333	0.56		905	22.14	0.0001
				938	0.1000	0.59		910	15.24	0.0001
				1005	0.0222	0.60		914	10.44	0.0001
				1101	0.0107	0.61		915	20.02	0.0001
								917	30.51	0.0001
								920	43.50	0.0002
								925	37.41	0.0003
								930	25.54	0.0004
								935	16.14	0.0004
								940	7.80	0.0004
								945	3.76	0.0004
								955	1.06	0.0004
								1005	0.55	0.0004
								1030	0.0	0.0004
								1038	0.0	0.0004
								1040	0.70	0.0004
								1042	3.76	0.0004
								1045	5.57	0.0004
								1050	6.09	0.0004
								1055	5.57	0.0004
								1105	2.99	0.0004
								1120	2.03	0.0004
								1140	1.06	0.0004
								1200	0.09	0.0004
								1220	0.0	0.0004
								1314	0.0	0.0004
								1315	5.57	0.0004
								1316	16.14	0.0004
								1317	26.74	0.0004
								1320	25.54	0.0004
								1330	22.14	0.0005
								1345	17.07	0.0006
								1400	10.44	0.0007
								1415	7.20	0.0008
								1430	4.61	0.0008
								1445	3.36	0.0008
								1500	1.50	0.0008
								1515	0.55	0.0008
								1530	0.15	0.0008
								1555	0.0	0.0008

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000269.



EVENT OF SEPTEMBER 15, 1969
TOMBSTONE, ARIZONA WATERSHED W-1

TOMBSTONE, ARIZONA WATERSHED W-2

LOCATION: Cochise County, Arizona; 2-3/4 miles NW of Tombstone, Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 28100.00 acres 43.90 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														TOMBSTONE, ARIZONA WATERSHED W-2																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																	
1969	F	0.40	0.47	0.17	0.01	0.41	0.01	3.35	2.84	1.14	0.17	0.42	0.47	9.86																	
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.006	0.004	0.0	0.0	0.0	0.013																	
STA AV	P	0.52	0.96	0.72	0.16	0.21	0.02	3.34	3.69	0.82	0.09	0.43	0.55	11.50																	
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.044	0.049	0.005	0.0	0.0	0.0	0.098																	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval										2 Days		5 Days											
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		5 Days															
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.														
1969		8- 7	0.004	9-15	0.002	9-15	0.003	9-15	0.004	9-15	0.004	9-14	0.004	9-13	0.004	8- 6	0.005														
MAXIMUMS FOR PERIOD OF RECORD																															
		7-26	0.160	7-26	0.130	7-26	0.170	7-26	0.210	9- 9	0.240	9- 9	0.240	9- 9	0.240	9- 9	0.430														
		1959		1959		1969		1959		1964		1964		1964		1964															

NOTES: Watershed Conditions: 55% of area in oak woodland and desert shrubs (whitethorn, creosotebrush, tarbush and matornia), with a 25% crown spread cover. 45% of area supports grass (black grama, curly mesquite, tobosa, blue grama and sideoats grama), with a basal area of 2.5%, and a shrub cover of approximately 6% crown spread. For topographic, geological and vegetation maps, see pages 63.1-3, 63.1-4, and 63.1-5, respectively of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226. Precipitation Data: Records began January 1954. Monthly totals are Thiessen weighted averages from 69 gages, station averages are for 2 yr only (1968-69). Runoff Data: Records began July 1959, station averages are based on 1966, 68 and 69 data. Temperature Data: See table of daily maximum and minimum value included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY PRECIPITATION (inches)														TOMBSTONE, ARIZONA WATERSHED W-2											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
1		0.0	0.0	0.0	0.0	0.0	0.0	0.15E	0.02	0.00	0.0	0.0	0.0												
2		0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0												
3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.08	0.0	0.0	0.15E												
4		0.0	0.00E	0.0	0.0	0.15E	0.0	0.0	0.01	0.16E	0.0	0.0	0.04E												
5		0.0	0.07E	0.0	0.0	0.18E	0.01	0.0	0.58E	0.01	0.0	0.0	0.0												
6		0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.32E	0.00	0.0	0.0	0.0												
7		0.0	0.04E	0.12S	0.0	0.0	0.0	0.0	0.08E	0.02	0.0	0.00	0.0												
8		0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.02	0.00	0.0	0.0	0.0												
9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
10		0.0	0.0	0.0	0.0	0.00	0.0	0.19E	0.0	0.0	0.0	0.03	0.0												
11		0.0	0.0	0.0	0.01	0.01	0.0	0.00	0.0	0.03E	0.0	0.0	0.00												
12		0.0	0.0	0.0	0.0	0.00	0.0	0.21E	0.17	0.0	0.0	0.0	0.0												
13		0.0	0.31E	0.0	0.0	0.01	0.0	0.0	0.46E	0.18E	0.0	0.0	0.0												
14		0.39E	0.01E	0.0	0.0	0.0	0.0	0.12	0.01E	0.13E	0.0	0.0	0.0												
15		0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.54E	0.0	0.09E	0.0												
16		0.0	0.0	0.0	0.0	0.0	0.00	0.08E	0.0	0.0	0.0	0.29E	0.0												
17		0.0	0.0	0.0	0.0	0.0	0.0	0.31E	0.0	0.0	0.0	0.0	0.0												
18		0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0												
19		0.0	0.01E	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0												
20		0.01	0.01E	0.0	0.0	0.0	0.0	0.12E	0.0	0.0	0.0	0.0	0.0												
21		0.00E	0.01E	0.0	0.0	0.0	0.0	0.43E	0.0	0.0	0.16	0.0	0.0												
22		0.0	0.00E	0.05	0.0	0.0	0.0	0.09	0.02	0.0	0.0	0.0	0.0												
23		0.0	0.01E	0.0	0.0	0.0	0.0	0.18E	0.17	0.0	0.0	0.0	0.0												
24		0.0	0.0	0.0	0.0	0.0	0.0	0.12E	0.32	0.0	0.0	0.0	0.0												
25		0.01E	0.0	0.0	0.0	0.0	0.0	0.19E	0.03	0.0	0.0	0.0	0.0												
26		0.0	0.0	0.0	0.0	0.0	0.0	0.19E	0.23E	0.0	0.0	0.0	0.0												
27		0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.00	0.0	0.0												
28		0.0	0.0	0.0	0.0	0.0	0.0	0.88E	0.09	0.0	0.01E	0.00	0.14E												
29		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.00	0.01E												
30		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0												
31		0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.04	0.0	0.0	0.0	0.0												
TOTAL		0.40	0.47	0.17	0.01	0.41	0.01	3.35	2.84	1.14	0.17	0.42	0.47												
STA AV		0.52	0.96	0.72	0.16	0.21	0.02	3.34	3.69	0.82	0.09	0.43	0.55												

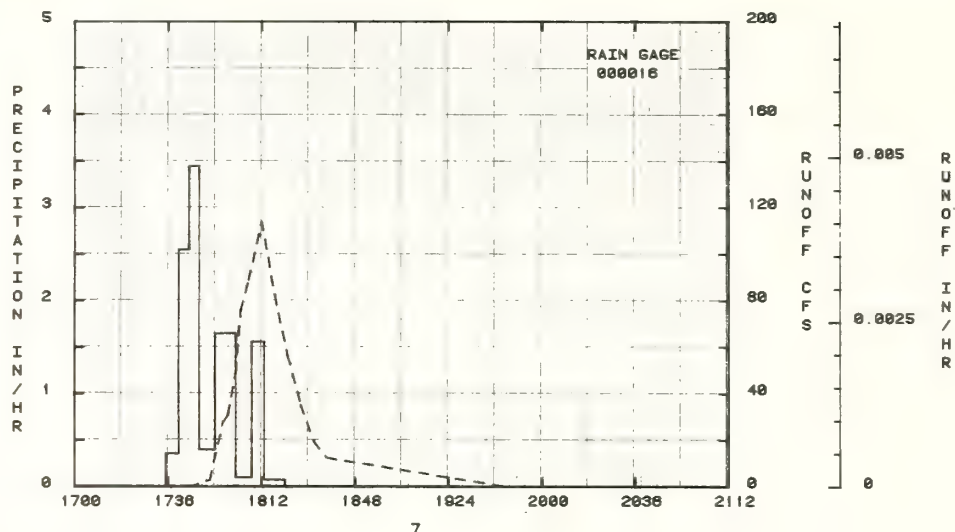
NOTES: Data are Thiessen weighted averages of values from 69 gages. STA AV are for 2 yr only (1968-69).

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA WATERSHED W-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.394	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.139	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.979	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.805	0.0	0.0	0.0	0.0
14	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.676	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.502	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.3	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.039	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.268	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	1.854	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	1.855	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.1209	0.2216	0.1632	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.006	0.004	0.0	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.044	0.049	0.005	0.0	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000847. STA AV are based on 1966, 1968 and 1969 data.

1969 SELECTED RUNOFF EVENT TOMBSTONE, ARIZONA WATERSHED W-2											
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF AUGUST 7, 1969											
RG 000016			RG 000016								
8- 7	0.04	0.0	8- 7	1735	0.0	0.0	8- 7	1744	0.0	0.0	
				1740	0.3600	0.03		1752	2.92	0.0	
				1744	2.5500	0.20		1757	27.29	0.0	
				1748	3.4500	0.43		1759	30.98	0.0	
				1754	0.4000	0.47		1802	48.94	0.0001	
WATERSHED CONDITIONS: Oak woodland and desert shrubs (Whitethorn, creosotebush, tarbush, and mormonia) with a crown spread of 25% cover, occupy 55% of the area. The remaining 45% supports grass (black grama, curly mesquite, tobosa, blue grama, and sideoats grama) with a basal area of 2.5% cover, and a shrub cover of approximately 6% crown spread.				1802	1.6500	0.69		1804	75.65	0.0002	
				1808	0.1000	0.70		1807	88.90	0.0003	
				1813	1.5601	0.83		1812	114.00	0.0006	
				1821	0.0750	0.84		1817	82.11	0.0009	
				1950	0.0	0.84		1822	56.15	0.0011	
				2119	0.0067	0.85		1827	34.98	0.0012	
								1832	19.41	0.0013	
								1837	12.29	0.0013	
								1945	0.13	0.0015	

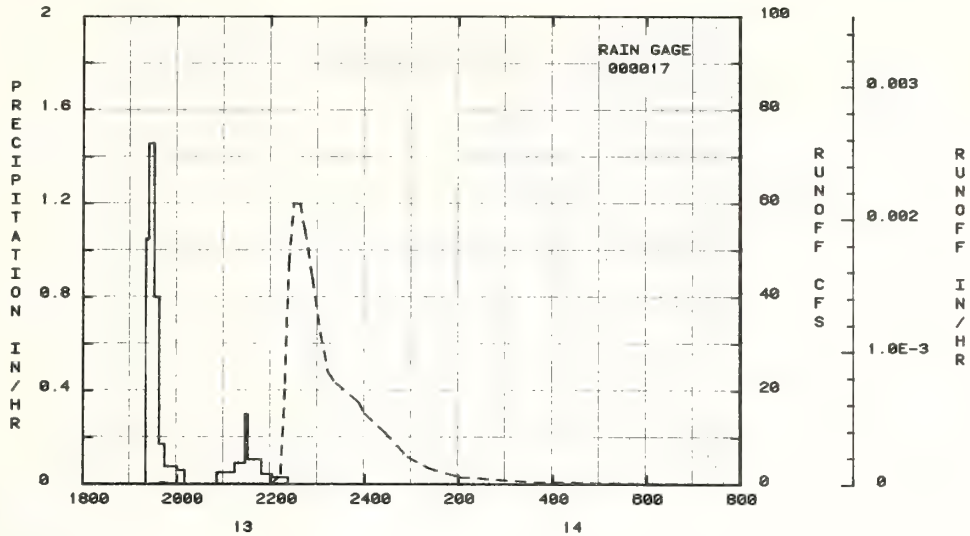
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000353.



EVENT OF AUGUST 7, 1969
TOMBSTONE, ARIZONA WATERSHED W-2

1969 SELECTED RUNOFF EVENT						TOMBSTONE, ARIZONA WATERSHED W-2				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF AUGUST 13 - 14, 1969										
8-13	RG 000017		8-13	RG 000017			8-13	1932	0.0	0.0
	0.0	0.000		1920	0.0	0.0		1938	0.28	0.0
				1924	1.0500	0.07		1939	0.41	0.0
				1931	1.4571	0.24		1941	0.41	0.0
				1937	0.8001	0.32		1953	0.13	0.0
				1944	0.1714	0.34				
WATERSHED CONDITIONS:				2000	0.0750	0.36		2003	0.04	0.0
Oak woodland and desert shrubs				2010	0.0600	0.37		2117	0.0	0.0
(Whitethorn, creosotebush,				2051	0.0	0.37		2201	0.01	0.0
tarbush, and mortonia) with				2114	0.0522	0.39		2213	2.33	0.0
a crown spread of 25% cover,				2127	0.0923	0.41		2218	21.53	0.0
occupy 55% of the area. The				2131	0.3000	0.43		2223	47.24	0.0001
remaining 45% supports grass				2148	0.1059	0.46		2229	60.00	0.0003
(black grama, curly mesquite,				2202	0.0429	0.47		2237	60.00	0.0006
tobosa, blue grama, and				2222	0.0300	0.48		2243	54.29	0.0008
sidecats grama) with a								2253	43.95	0.0011
basal area of 2.5% cover,										
and a shrub cover of										
approximately 6% crown spread.										
								2303	32.28	0.0013
								2313	23.80	0.0015
								2323	21.53	0.0016
								2352	17.43	0.0019
								2400	14.98	0.0020
							8-14	25	11.10	0.0022
								55	5.75	0.0023
								121	3.45	0.0024
								201	1.52	0.0025
								337	0.41	0.0026
								1008	0.03	0.0027

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000353.



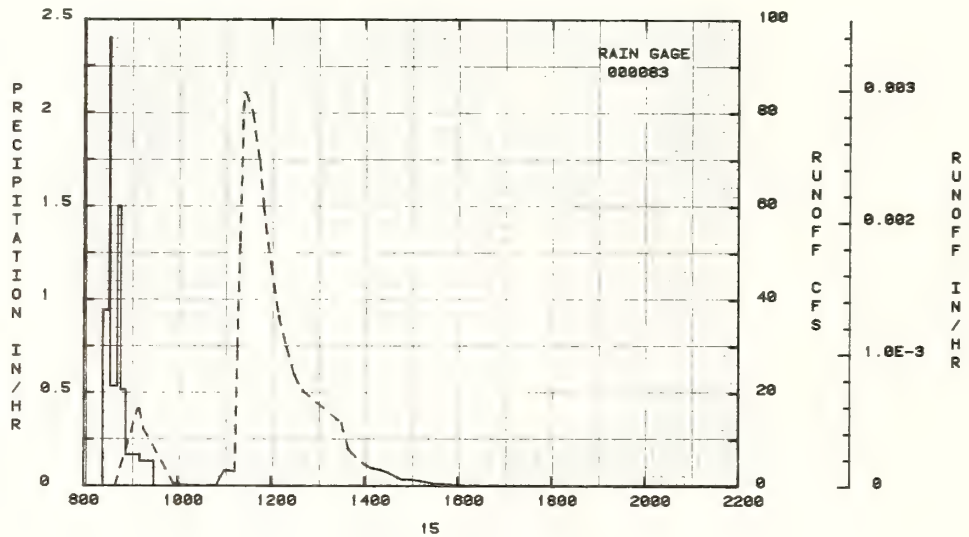
EVENT OF AUGUST 13 - 14, 1969
TOMBSTONE, ARIZONA WATERSHED W-2

1969 SELECTED RUNOFF EVENT						TOMBSTONE, ARIZONA WATERSHED W-2				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 15, 1969										
9-15	0.0	0.000	9-15	825	0.0	0.0	9-15	840	0.01	0.0
				832	0.9429	0.11		909	16.50	0.0001
				834	2.4000	0.19		911	16.50	0.0001
				843	0.5333	0.27		916	12.29	0.0001
				847	1.5000	0.37		955	0.57	0.0002
WATERSHED CONDITIONS: Oak woodland and desert shrubs (Whitethorn, creosotebush, tarbush, and mertonia) with a crown spread of 25% cover, occupy 55% of the area. The remaining 45% supports grass (black grama, curly mesquite, tobosa, blue grama, and sideoats grama) with a basal area of 2.5% cover, and a shrub cover of approximately 6% crown spread.				854	0.5143	0.43		1005	0.22	0.0002
				912	0.1667	0.48		1015	0.10	0.0002
				930	0.1333	0.52		1050	0.07	0.0002
								1055	1.67	0.0002
								1100	3.27	0.0002
								1107	3.27	0.0002
								1114	3.10	0.0002
								1117	29.72	0.0002
								1120	52.46	0.0003
								1125	84.33	0.0005
								1127	84.33	0.0006
								1136	79.92	0.0010
								1145	69.52	0.0014
								1150	60.00	0.0016
								1200	47.24	0.0019
								1210	36.38	0.0021
								1220	29.72	0.0023
								1230	23.80	0.0025
								1240	20.45	0.0026
								1330	13.58	0.0031
								1340	7.67	0.0032
								1400	4.59	0.0033
								1409	3.81	0.0033
								1420	3.45	0.0033
								1430	2.92	0.0033
								1441	1.99	0.0033
								1448	1.38	0.0033
								1500	1.38	0.0033
								1515	1.00	0.0033
								1528	0.49	0.0033

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000353.

1969 SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA WATERSHED W-2							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 15, 1969 (CONTINUED)										
							9-15	1540	0.41	0.0033
								1555	0.22	0.0033
								1616	0.13	0.0033
								1720	0.10	0.0033

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000353.



EVENT OF SEPTEMBER 15, 1969
TOMBSTONE, ARIZONA WATERSHED W-2

TOMBSTONE, ARIZONA WATERSHED W-3

LOCATION: Cochise County; 1.3 miles north of Tombstone; tributary of Walnut Gulch; San Pedro River, Gila River, Colorado River Basin.

AREA: 2220.00 acres 3.47 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										TOMBSTONE, ARIZONA WATERSHED W-3									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	0.36	0.56	0.21	0.0	0.30	0.00	2.55	2.99	1.08	0.16	0.45	0.42	9.09					
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.000	0.002	0.0	0.0	0.0	0.004					
STA AV	P	0.57	0.41	0.42	0.15	0.09	0.23	3.52	3.00	1.27	0.45	0.44	0.77	11.30					
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.094	0.025	0.0	0.0	0.0	0.144					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge Date Rate		1 Hour Date Vol.		2 Hours Date Vol.		Maximum Volume for Selected Time Interval 6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.		8 Days Date Vol.			
1969		9-15	0.004	9-15	0.001	9-15	0.001	9-15	0.001	9-14	0.001	9-14	0.001	9-13	0.002	9-7	0.002		
MAXIMUMS FOR PERIOD OF RECORD																			
		8-16	0.580	8-17	0.240	8-17	0.280	8-17	0.280	8-17	0.280	8-17	0.280	8-17	0.280	8-14	0.420		
		1958		1961		1961		1961		1961		1961		1961		1958			

NOTES: Watershed conditions: Vegetative cover; Desert shrubs (whitethorn, creosotebush, and tarbush) with a crown spread approximately 30% and grasses with basal area of approximately 0.8% cover occupy 55% of the area. Grasses (black grama, curly mesquite, tobosa) with basal area of 2.6% cover and shrub cover of 2% occupy the remaining 45% of the area. For topography, geologic and vegetation maps, see pages 63.1-3, 63.1-4 and 63.1-5 of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. No. 1226. Precipitation Data: Records began 1955. Monthly totals are Thiessen weighted averages of 13 gages, station averages are based on record period (1955-69). Runoff Data: Records began 1958, station averages are based on record period (1958-69). Temperature Data: See table of daily maximum and minimum values included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969					TOMBSTONE, ARIZONA WATERSHED W-3																					
DAILY PRECIPITATION (inches)																										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec														
1	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.01	0.0	0.0	0.0	0.0	0.0													
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.09	0.0	0.0	0.0	0.13E													
4	0.0	0.0	0.0	0.0	0.0	0.14E	0.0	0.01	0.03E	0.0	0.0	0.0	0.03E													
5	0.0	0.06E	0.0	0.0	0.0	0.15E	0.00	0.0	0.42	0.0	0.0	0.0	0.0													
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42E	0.0	0.0	0.0	0.0	0.0													
7	0.0	0.02E	0.15S	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0													
8	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0													
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
10	0.0	0.0	0.0	0.0	0.0	0.0	0.36E	0.0	0.0	0.0	0.05	0.0	0.0													
11	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.01E	0.0	0.0	0.0	0.0													
12	0.0	0.0	0.0	0.0	0.00	0.0	0.04E	0.11	0.0	0.0	0.0	0.0	0.0													
13	0.0	0.44	0.0	0.0	0.0	0.0	0.0	0.45	0.20E	0.0	0.0	0.0	0.0													
14	0.32	0.0	0.0	0.0	0.0	0.0	0.11	0.00	0.15E	0.0	0.0	0.0	0.0													
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59E	0.0	0.11	0.0	0.0													
16	0.0	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.29	0.0	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.0	0.30E	0.0	0.0	0.0	0.0	0.0	0.0													
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
19	0.0	0.00E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
20	0.03	0.01E	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0													
21	0.01E	0.01E	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.16	0.0	0.0	0.0													
22	0.0	0.00E	0.06	0.0	0.0	0.0	0.20	0.10	0.0	0.0	0.0	0.0	0.0													
23	0.0	0.01E	0.0	0.0	0.0	0.0	0.13E	0.29	0.0	0.0	0.0	0.0	0.0													
24	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.48	0.0	0.0	0.0	0.0	0.0													
25	0.00E	0.0	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0													
26	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.18	0.0	0.0	0.0	0.0	0.0													
27	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.0													
28	0.0	0.0	0.0	0.0	0.0	0.0	0.74E	0.11	0.0	0.00	0.0	0.0	0.12E													
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0													
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0													
31	0.0		0.0		0.0		0.01	0.14		0.0			0.0													
TOTAL	0.36	0.56	0.21	0.0	0.30	0.00	2.55	2.99	1.08	0.16	0.45	0.42														
STA AV	0.57	0.41	0.42	0.15	0.09	0.23	3.52	3.00	1.27	0.45	0.44	0.77														

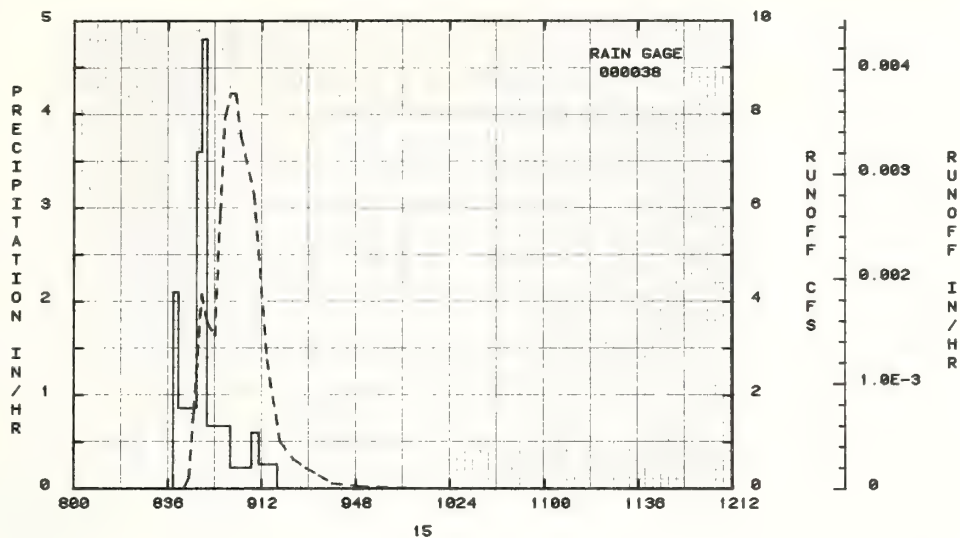
NOTES: Data are Thiessen weighted averages from 13 rain gages. STA AV are based on record period (1955-69).

1969		MEAN DAILY DISCHARGE (cfs)					TOMBSTONE, ARIZONA WATERSHED W-3						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.039	0.023	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.124	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.060	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.033	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.089	0.0	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0069	0.0014	0.0049	0.0	0.0	0.0	
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.000	0.002	0.0	0.0	0.0	
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.094	0.025	0.0	0.0	0.0	

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.010721. STA AV based on record period (1958-69).

1969			SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA WATERSHED W-3				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 15, 1969										
RG 000038			RG 000038							
9-15	0.0	0.0	9-15	838	0.0	0.0	9-15	882	0.0	0.0
				840	2.1000	0.07		884	0.22	0.0
				847	0.8571	0.17		886	1.66	0.0
				849	3.5999	0.29		889	4.16	0.0001
				851	4.8001	0.45		851	3.55	0.0002
WATERSHED CONDITIONS:										
Vegetative Cover: Desert			900			0.6667	0.55	854	3.27	0.0003
shrubs (whitethorn, creosote-			908			0.2250	0.58	856	5.89	0.0004
bush, and tarbrush) with			911			0.6000	0.61	858	7.98	0.0005
a crown spread approximately			918			0.2571	0.64	900	8.44	0.0006
30% and grasses with basal								902	8.44	0.0007
area of approximately 0.8%										
cover, occupy 55% of the area.								904	7.53	0.0008
Grasses (black grama, curly								909	6.28	0.0011
mesquite, tobosa) with a								914	2.75	0.0013
basal area of 2.6% cover								919	1.00	0.0014
and shrub cover of 2% occupy								924	0.63	0.0014
the remaining 45% of the										
area.								929	0.44	0.0014
								934	0.28	0.0014
								939	0.11	0.0014
								949	0.05	0.0014
								1009	0.01	0.0014
								1034	0.0	0.0014
								1055	0.0	0.0014

NOTES: To convert runoff in CPS to IN/HR, multiply by 0.000447.



EVENT OF SEPTEMBER 15, 1969
TOMBSTONE, ARIZONA WATERSHED W-3

TOMBSTONE, ARIZONA W-4

LOCATION: Cochise County, Arizona; 2 miles north of Tombstone; Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 560.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)								TOMBSTONE, ARIZONA W-4							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.35	0.60	0.23	0.0	0.32	0.0	2.83	2.54	1.03	0.21	0.49	0.42	9.00	
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.002	0.0	0.0	0.0	0.003	
STA AV	P	0.52	0.40	0.43	0.15	0.09	0.24	3.45	3.04	1.27	0.44	0.43	0.75	11.21	
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.406	0.122	0.017	0.0	0.0	0.0	0.545	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		1 Day		Date	Vol.	Date	Vol.
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		9-15	0.005	9-15	0.002	9-15	0.002	9-15	0.002	9-14	0.002	9-14	0.002	9-13	0.002
														9- 7	0.002
MAXIMUMS FOR PERIOD OF RECORD															
		7-19	2.250	7-19	0.980	7-19	1.100	7-19	1.100	7-19	1.100	7-19	1.630	7-19	1.630
		1955		1955		1955		1955		1955		1955		1955	
														4-370	

NOTES: Watershed conditions: Vegetative cover: 100% dominated by desert shrubs (whitethorn, creosotebush, and tarbush) with a crown spread of approximately 38% and an understory of grasses with approximately 0.6% basal cover. For topography, geological, and vegetative maps, see pages 63.1-3, 63.1-4 and 63.1-5 respectively of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226. Precipitation Data: Record began July 1954. Monthly totals are Thiessen weighted averages of three rain gages, station averages are based on record period (1955-69). Runoff Data: Records began January 1955, station averages based on 13 yr (1955-58) and (1961-69). Temperature Data: See table of daily maximum and minimum values included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY PRECIPITATION (inches)													TOMBSTONE, ARIZONA W-4	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.02	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.12	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.15E	0.0	0.0	0.01	0.0	0.0	0.0	0.0		
5	0.0	0.07E	0.0	0.0	0.16E	0.0	0.0	0.34	0.0	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0		
7	0.0	0.02E	0.16S	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0	0.0	0.09	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.03	0.0	0.0	0.0	0.0		
13	0.0	0.47	0.0	0.0	0.0	0.0	0.0	0.34	0.21	0.0	0.0	0.0		
14	0.34	0.0	0.0	0.0	0.0	0.0	0.14	0.01	0.07	0.0	0.0	0.0		
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.0	0.12	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.28	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.02E	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0		
21	0.01E	0.01E	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.20	0.0	0.0		
22	0.0	0.0	0.06	0.0	0.0	0.0	0.34	0.06	0.0	0.0	0.0	0.0		
23	0.0	0.01E	0.0	0.0	0.0	0.0	0.11	0.32	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.31	0.0	0.0	0.0	0.0		
25	0.00E	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.13	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.73	0.18	0.0	0.00	0.0	0.0		
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0		
TOTAL		0.35	0.60	0.23	0.0	0.32	0.0	2.83	2.54	1.03	0.21	0.49	0.42	
STA AV		0.52	0.40	0.43	0.15	0.09	0.24	3.45	3.04	1.27	0.44	0.43	0.75	

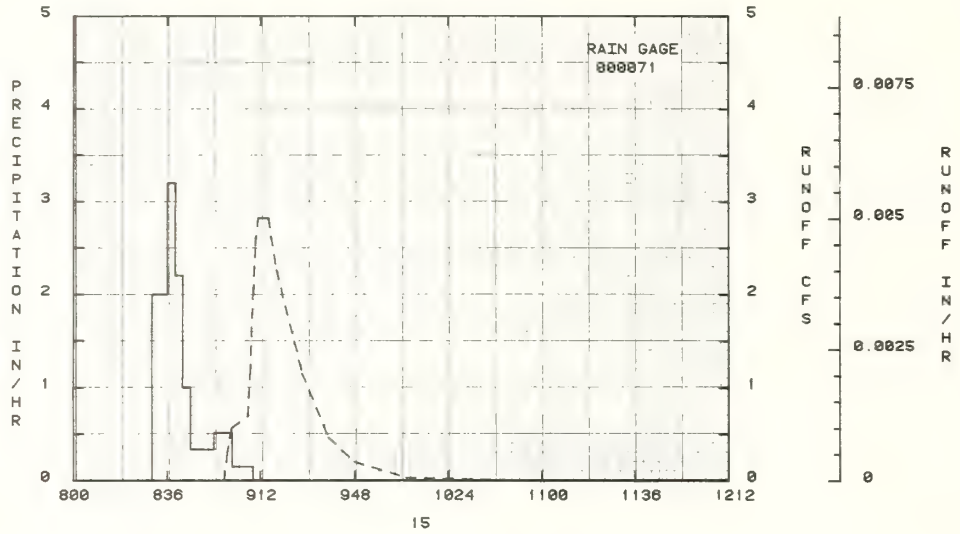
NOTES: Data are Thiessen weighted averages of values from three gages. STA AV are for record period (1955-69).

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA W-4												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.043	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.009	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.011	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0006	0.0	0.0014	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.002	0.0	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.406	0.122	0.017	0.0	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.042502. STA AV based on record period (1955-58) and (1961-69).

1969 SELECTED RUNOFF EVENT TOMBSTONE, ARIZONA W-4												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF SEPTEMBER 15, 1969												
RG 000071												
9-15	0.0	0.0	9-15	830	0.0	0.0	9-15	858	0.0	0.0		
				836	2.0000	0.20		859	0.270	0.0		
				839	3.2000	0.36		900	0.460	0.0		
				842	2.2000	0.47		901	0.570	0.0		
				845	1.0000	0.52		907	0.690	0.0001		
WATERSHED CONDITIONS:												
100% of area dominated by												
desert shrubs (whitethorn,												
creosotebush and tarbush)												
with a crown spread of												
approximately 33% and an												
understory of grasses with												
approximately 0.6% basal												
cover.												
				854	0.3333	0.57		908	1.150	0.0001		
				901	0.5143	0.63		909	2.000	0.0001		
				909	0.1500	0.65		910	2.530	0.0002		
								911	2.820	0.0003		
								915	2.820	0.0007		
								918	2.260	0.0009		
								928	1.150	0.0014		
								938	0.460	0.0016		
								948	0.200	0.0017		
								1008	0.030	0.0018		
								1054	0.0	0.0018		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001771.



EVENT OF SEPTEMBER 15, 1969

TOMBSTONE, ARIZONA W-4

TOMBSTONE, ARIZONA W-6

LOCATION: Cochise County; 3/4 mile north of Tombstone; Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 23500.00 acres 36.70 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													TOMBSTONE, ARIZONA W-6	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P 0.42	0.47	0.16	0.01	0.45	0.01	3.29	2.88	1.14	0.19	0.42	0.47	9.92	
	Q 0.0	0.0	0.0	0.0	0.0	0.0	0.000	0.001	0.001	0.0	0.0	0.0	0.002	
STA AV	P 0.53	0.98	0.71	0.16	0.22	0.02	3.32	3.73	0.81	0.10	0.44	0.57	11.59	
	Q 0.0	0.0	0.0	0.0	0.0	0.0	0.054	0.041	0.008	0.0	0.0	0.0	0.103	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		1 Day		2 Days		8 Days	
	Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	9-15	0.001	9-15	0.000	8-13	0.001	8-13	0.001	8-13	0.001	8-12	0.001	8- 6	0.001
MAXIMUMS FOR PERIOD OF RECORD														
	7-26	0.100	7-28	0.080	7-28	0.100	7-28	0.110	7-28	0.110	7-28	0.110	7-28	0.180
	1966		1966		1966		1966		1966		1966		1963	

NOTES: Watershed conditions: Vegetative cover: Oak woodland and desert shrubs (whitethorn, creosotebush, tarbush, mertonia) occupy approximately 45% of area, with a crown spread of 25% cover. The remaining 55% of the area supports a grass cover (black grama, curly mesquite, tobosa, blue grama, and sideoats grama) with a basal area of 2.5% cover and a shrub cover of approximately 6% crown spread. For topographic, geologic and vegetative maps, see pages 63.1-3, 63.1-4, and 63.1-5, respectively, of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226. Precipitation Data: Records began 1962. Monthly totals are Thiessen weighted averages of values from 57 gages, station averages are based on 1968 and 1969 record period. Runoff Data: Records began 1962, station averages based on 3 yr of data (1966, 68 and 69). Temperature Data: See table of daily maximum and minimum values included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY PRECIPITATION (inches)													TOMBSTONE, ARIZONA W-6	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.12E	0.02	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.06	0.0	0.0	0.15E		
4	0.0	0.00E	0.0	0.0	0.17E	0.0	0.0	0.00	0.19E	0.0	0.0	0.04E		
5	0.0	0.08E	0.0	0.0	0.19E	0.01	0.0	0.62E	0.01	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.30E	0.00	0.0	0.0	0.0		
7	0.0	0.04E	0.11S	0.0	0.0	0.0	0.0	0.06E	0.01	0.0	0.00	0.0		
8	0.0	0.00E	0.0	0.0	0.0	0.0	0.01	0.02	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.00	0.0	0.13E	0.0	0.0	0.0	0.03	0.0		
11	0.0	0.0	0.0	0.01	0.01	0.0	0.00	0.0	0.03E	0.0	0.0	0.00		
12	0.0	0.0	0.0	0.0	0.00	0.0	0.24E	0.19	0.0	0.0	0.0	0.0		
13	0.0	0.30E	0.0	0.0	0.02	0.0	0.0	0.45E	0.17E	0.0	0.0	0.0		
14	0.41E	0.01E	0.0	0.0	0.0	0.0	0.13	0.01E	0.14E	0.0	0.0	0.0		
15	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.52E	0.0	0.09E	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.00	0.08E	0.0	0.0	0.0	0.30E	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.27E	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0		
20	0.00	0.01E	0.0	0.0	0.0	0.0	0.13E	0.0	0.0	0.0	0.0	0.0		
21	0.00E	0.01E	0.0	0.0	0.0	0.0	0.47E	0.0	0.0	0.18	0.0	0.0		
22	0.0	0.00E	0.05	0.0	0.0	0.0	0.06	0.02	0.0	0.0	0.0	0.0		
23	0.0	0.01E	0.0	0.0	0.0	0.0	0.15E	0.17	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.15E	0.33	0.0	0.0	0.0	0.0		
25	0.01E	0.0	0.0	0.0	0.0	0.0	0.15E	0.03	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.20E	0.25E	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.00	0.0	0.14E		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.90E	0.09	0.0	0.01E	0.00	0.13E		
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.00	0.01E		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.00		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.0	0.0	0.0	0.0		
TOTAL	0.42	0.47	0.16	0.01	0.45	0.01	3.29	2.88	1.14	0.19	0.42	0.47		
STA AV	0.53	0.98	0.71	0.16	0.22	0.02	3.32	3.73	0.81	0.10	0.44	0.57		

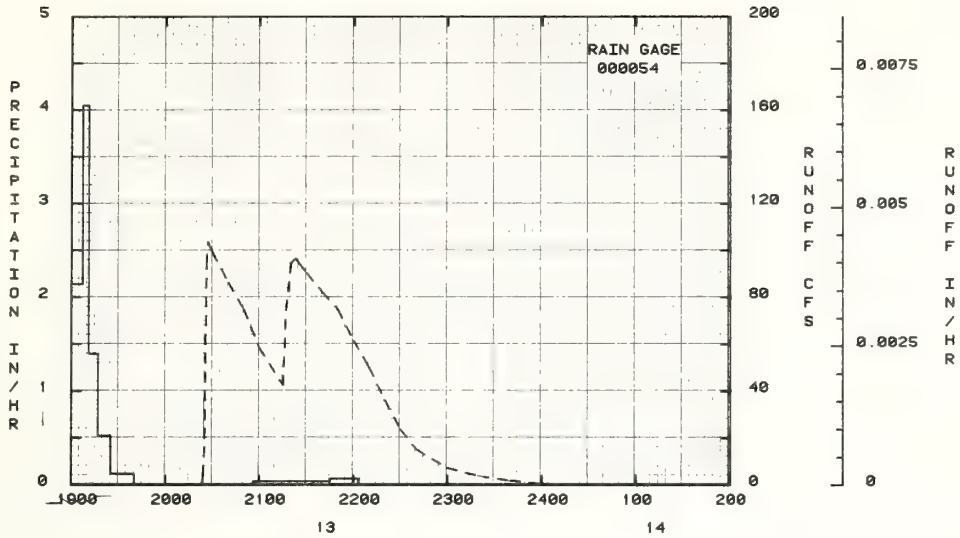
NOTES: Daily precipitation are Thiessen weighted averages of values from 57 gages. STA AV based on 2 yr only (1968-69).

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA W-6												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.360E	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005E	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.263E	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	1.029E	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.057E	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.939E	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.109	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.322	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	3.269	0.063	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1544	0.3344	0.1754	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000	0.001	0.001	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.054	0.041	0.008	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.001013. STA AV based on record period (1966,68 and 69).

1969 SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA W-6									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF AUGUST 13 - 14, 1969												
8-13	RG 000054		8-13	RG 000054			8-13					
	0.0	0.0		1900	0.0	0.0		1945	0.0	0.0		
				1907	2.1431	0.25		1950	0.09	0.0		
				1911	4.0501	0.52		2000	0.28	0.0		
				1917	1.3999	0.66		2010	0.14	0.0		
				1925	0.5250	0.73		2020	0.09	0.0		
WATERSHED CONDITIONS:												
Vegetative Cover: Oak				1940	0.1200	0.76	2023	0.09	0.0			
woodland and desert shrubs				2056	0.0	0.76	2024	4.24	0.0			
(whitethorn, creosotebush,				2145	0.0367	0.79	2025	20.01	0.0			
tarbush, matornia) occupy				2203	0.0667	0.81	2026	94.54	0.0			
approximately 45% of the							2027	103.40	0.0			
area, with a crown spread												
of 25% cover. The remaining							2030	98.92	0.0			
55% of the area supports a							2040	86.08	0.0001			
grass cover (black grama,							2050	74.63	0.0002			
curly mesquite,tobosa, blue							2100	58.34	0.0002			
grama, and sideoats grama)							2115	42.45	0.0003			
with basal area of 2.5% cover												
and shrub cover of 6% crown							2117	74.63	0.0003			
spread.							2120	94.54	0.0003			
							2123	96.72	0.0003			
							2125	94.54	0.0003			
							2130	90.26	0.0003			
							2140	82.00	0.0004			
							2150	74.63	0.0005			
							2200	61.37	0.0005			
							2210	49.93	0.0005			
							2220	35.83	0.0005			
							2230	23.44	0.0005			
							2240	15.06	0.0005			
							2300	7.14	0.0005			
							2320	3.73	0.0005			
							2340	1.77	0.0005			
							2400	0.46	0.0005			
							20	0.09	0.0005			
							40	0.01	0.0005			
							100	0.0	0.0005			

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000042.



EVENT OF AUGUST 13 - 14, 1969
TOMBSTONE, ARIZONA W-6

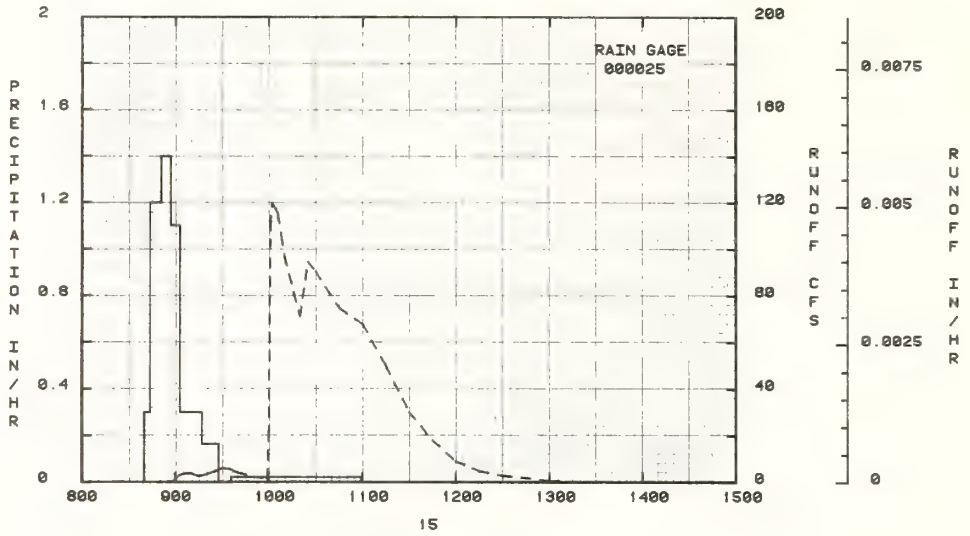
1969 SELECTED RUNOFF EVENT

TOMBSTONE, ARIZONA W-6

ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	No-Day	of Day	(cfs)
EVENT OF SEPTEMBER 15, 1969								
9-15	RG 000025 0.0	0.0	9-15	840	0.0	9-15	853	0.0
				844	0.3000		855	0.06
				851	1.2000		858	0.20
				857	1.4000		900	0.84
				903	1.1000		902	2.81
				917	0.3000		905	3.49
				928	0.1636		910	3.73
				936	0.0		915	2.59
				1059	0.0217		920	3.26
				1217	0.0		925	4.50
							930	5.93
							935	5.55
							940	3.98
							950	2.19
							959	1.55
							1000	20.01
							1001	110.31
							1002	119.88
							1004	117.45
							1006	115.04
							1008	105.68
							1010	96.72
							1020	71.13
							1025	94.54
							1030	90.26
							1045	74.63
							1100	67.76
							1115	49.93
							1130	30.00
							1145	17.92
							1200	8.96
							1215	4.84
							1230	2.81
							1300	0.58
							1330	0.01

WATERSHED CONDITIONS:
Vegetative Cover: Oak
woodland and desert shrubs
(whitethorn, creosotebush,
tarbush, mormonia) occupy
approximately 45% of the
area, with a crown spread
of 25% cover. The remaining
55% of the area supports a
grass cover (black grama,
curly mesquite, tobosa, blue
grama, and sideoats grama)
with a basal area of 2.5%
cover and shrub cover of 6%
crown spread.

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000042.



EVENT OF SEPTEMBER 15, 1969
TOMBSTONE, ARIZONA W-6

TOMBSTONE, ARIZONA W-8

LOCATION: Cochise County; 1-1/2 miles northeast of Tombstone; Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 3830.00 acres 5.98 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														TOMBSTONE, ARIZONA W-8															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.37	0.50	0.18	0.00	0.39	0.00	2.40	3.54	1.21	0.21	0.40	0.43	9.65															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.030	0.064	0.033	0.0	0.0	0.0	0.127															
STA AV	P	0.50	1.09	0.68	0.15	0.19	0.02	2.17	3.96	1.00	0.11	0.45	0.53	10.84															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.042	0.064	0.014	0.0	0.0	0.0	0.120															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days													
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		9-15	0.031	9-15	0.022	8-13	0.036	8-13	0.040	8-13	0.040	8-13	0.040	8-12	0.040	8- 6	0.040												
MAXIMUMS FOR PERIOD OF RECORD																													
		7-22	1.110	7-22	0.310	7-22	0.320	7-22	0.340	7-22	0.340	7-22	0.340	7-22	0.340	7-22	0.340												
1964		1964		1964		1964		1964		1964		1964		1964		1964													

NOTES: Watershed conditions: Vegetative cover; approximately 33% of area is dominated by desert shrubs (white-thorn, creosotebush, tarbush) with a crown spread of approximately 30% and an understory of grasses with less than 1% basal area. The remaining 67% of the area is dominated by grasses (black grama, curly mesquite, sideoats grama) with a basal area of about 2.5% interspersed by desert shrubs with a crown spread of 5%. For topographic, geologic, and vegetation maps, see pages 63.1-3, 63.1-4 and 63.1-5, respectively, of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226. Precipitation Data: Records began 1963. Monthly totals are Thiessen weighted averages of 17 gages, station averages are based on 1968 and 1969 data. Runoff Data: Records began 1963, station averages are based on 1966, 68 and 69 data. Temperature Data: See table of daily maximum and minimum values included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY PRECIPITATION (inches)													TOMBSTONE, ARIZONA W-8	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.08	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.03	0.0	0.0	0.14E		
4	0.0	0.01E	0.0	0.0	0.16E	0.0	0.0	0.0	0.31E	0.0	0.0	0.02E		
5	0.0	0.07E	0.0	0.0	0.16E	0.00	0.0	0.48	0.00	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.43E	0.0	0.0	0.0	0.0		
7	0.0	0.04E	0.12S	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.00	0.0	0.08E	0.0	0.0	0.0	0.01	0.0		
11	0.0	0.0	0.0	0.00	0.01	0.0	0.00	0.0	0.01E	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.19E	0.29	0.0	0.0	0.0	0.0		
13	0.0	0.36	0.0	0.0	0.02	0.0	0.0	0.65	0.13E	0.0	0.0	0.0		
14	0.35	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.19E	0.0	0.0	0.0		
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54E	0.0	0.10E	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.00	0.06E	0.0	0.0	0.0	0.29E	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.25E	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.02	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0		
21	0.00E	0.01E	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.21	0.0	0.0		
22	0.0	0.00E	0.06	0.0	0.0	0.0	0.01	0.07	0.0	0.0	0.0	0.0		
23	0.0	0.02E	0.0	0.0	0.0	0.0	0.11E	0.26	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.04E	0.55	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.23	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.15E		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.80E	0.12	0.0	0.0	0.0	0.12E		
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.00E		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.12	0.0	0.0	0.0	0.0		
TOTAL	0.37	0.50	0.18	0.00	0.39	0.00	2.40	3.54	1.21	0.21	0.40	0.43		
STA AV	0.50	1.09	0.68	0.15	0.19	0.02	2.17	3.96	1.00	0.11	0.45	0.53		

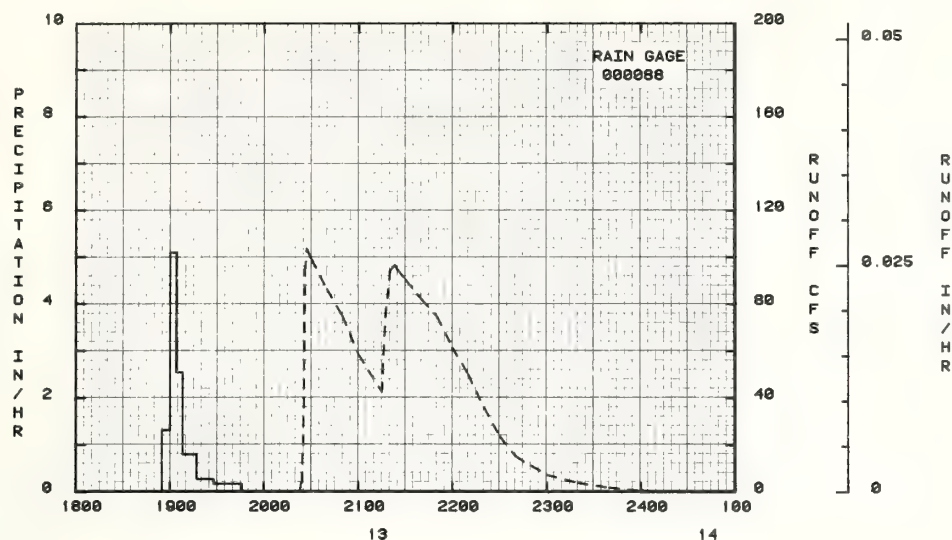
NOTES: Data are Thiessen weighted averages from 17 rain gages. STA AV are based on 1968 and 1969 data.

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA W-8												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.360E	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005E	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.263E	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	1.029E	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.057E	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.939E	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.109	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.322	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	3.269	0.063	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.1544	0.3344	0.1754	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.030	0.064	0.033	0.0	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.042	0.064	0.014	0.0	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.006214. STA AV are based on 3 yr only (1966, 1968 and 1969).

1969 SELECTED RUNOFF EVENT TOMBSTONE, ARIZONA W-8												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Date	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF AUGUST 13 - 14, 1969												
RG 000088			RG 000088									
8-13	0.0	0.0	8-13	1855	0.0	0.0	8-13	2010	0.14	0.0		
				1900	1.3198	0.11		2020	0.09	0.0		
				1904	5.1001	0.45		2023	0.09	0.0		
				1908	2.5500	0.62		2024	4.24	0.0		
				1917	0.8000	0.74		2025	20.01	0.0		
WATERSHED CONDITIONS: Vegetative cover: Approximately 33% of the area is dominated by desert shrubs (whitethorn, creosotebush, tarbush) with a crown spread of approximately 30% and an understory of grasses with less than 1% basal area. The remaining 67% of the area is dominated by grasses (black grama, curly mesquite, sideoats grama) with a basal area of about 2.5%, interspersed by desert shrubs with a crown spread of about 5%.				1928	0.2727	0.79		2026	94.54	0.0002		
				1946	0.1667	0.84		2027	103.40	0.0007		
				2025	0.0	0.84		2030	98.92	0.0020		
				2113	0.0125	0.85		2040	86.08	0.0059		
								2050	74.63	0.0094		
								2100	58.34	0.0123		
								2115	42.45	0.0156		
								2117	74.63	0.0161		
								2120	94.54	0.0172		
								2123	96.72	0.0185		
								2125	94.54	0.0193		
								2130	90.26	0.0214		
								2140	82.00	0.0251		
								2150	74.63	0.0285		
								2200	61.37	0.0315		
								2210	49.93	0.0339		
								2220	35.83	0.0358		
								2230	23.44	0.0371		
								2240	15.06	0.0379		
								2300	7.14	0.0389		
								2320	3.73	0.0394		
								2340	1.77	0.0396		
								2400	0.46	0.0397		
							8-14	20	0.09	0.0397		
								40	0.01	0.0397		
									100	0.0	0.0397	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000259.



EVENT OF AUGUST 13 - 14, 1969

TOMBSTONE, ARIZONA W-8

1969 SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA W-8							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)

EVENT OF SEPTEMBER 15, 1969

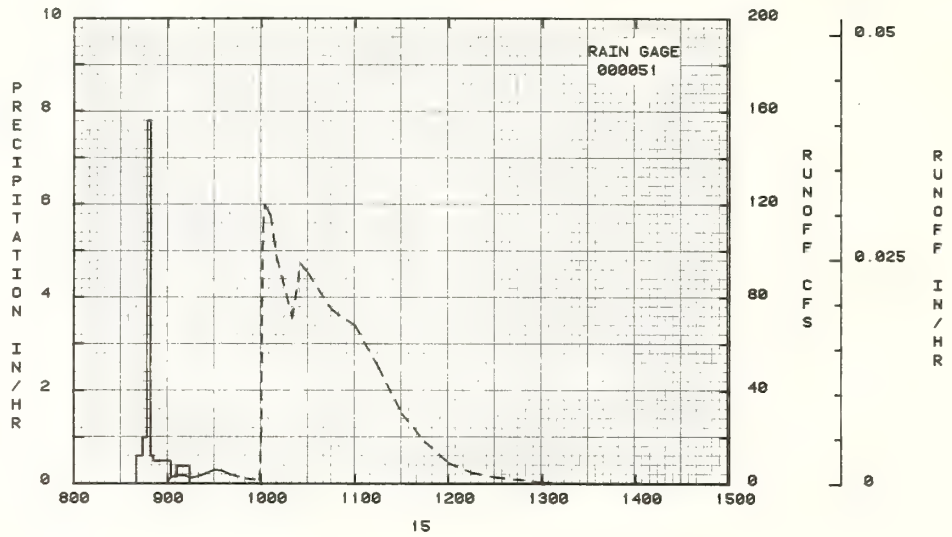
RG 000051			RG 000051							
9-15	0.0	0.0	9-15	840	0.0	0.0	9-15	900	0.84	0.0
				844	0.6000	0.04		902	2.81	0.0
				847	1.0000	0.09		905	3.49	0.0
				849	7.7999	0.35		910	3.73	0.0001
				851	0.6000	0.37		915	2.59	0.0002

WATERSHED CONDITIONS:

Vegetative cover: Approximately 33% of the area is dominated by desert shrubs (whitethorn, creosotebush, tarbush) with a crown spread of approximately 30% and an understory of grasses with less than 1% basal area. The remaining 67% of the area is dominated by grasses (black grama, curly mesquite, sideoats grama) with a basal area of about 2.5%, interspersed by desert shrubs with a crown spread of about 5%.

	902	3.26	0.0003
	906	0.1500	0.47
	914	0.3750	0.52
	920	3.26	0.0003
	925	4.50	0.0004
	930	5.93	0.0005
	935	5.55	0.0006
	940	3.98	0.0007
	950	2.19	0.0008
	959	1.55	0.0009
	1000	20.01	0.0010
	1001	110.31	0.0013
	1002	119.88	0.0018
	1004	117.45	0.0029
	1006	115.04	0.0038
	1008	105.68	0.0048
	1010	96.72	0.0056
	1020	71.13	0.0093
	1025	94.54	0.0111
	1030	90.26	0.0132
	1045	74.63	0.0185
	1100	67.76	0.0231
	1115	49.93	0.0269
	1130	30.00	0.0295
	1145	17.92	0.0311
	1200	8.96	0.0320
	1215	4.84	0.0324
	1230	2.81	0.0326
	1300	0.58	0.0328
	1330	0.01	0.0328
	1400	0.0	0.0328

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000259.



EVENT OF SEPTEMBER 15, 1969

TOMBSTONE, ARIZONA W-8

TOMBSTONE, ARIZONA W-11

LOCATION: Cochise County; 4-1/3 miles northeast of Tombstone; Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 2035.00 acres 3.18 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						TOMBSTONE, ARIZONA W-11							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969 P	0.40	0.50	0.16	0.01	0.45	0.00	2.22	3.83	1.31	0.27	0.42	0.43	9.99
Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.082	0.039	0.0	0.0	0.0	0.121
STA AV P	0.53	1.02	0.70	0.15	0.23	0.02	1.94	4.41	0.98	0.14	0.50	0.53	11.13
Q	0.0	0.0	0.0	0.0	0.0	0.0	0.103	0.123	0.025	0.0	0.0	0.0	0.251

ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS													
Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days	
Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969 8-13	0.128	8-13	0.071	8-13	0.080	8-13	0.080	8-13	0.080	8-12	0.080	8-11	0.080
MAXIMUMS FOR PERIOD OF RECORD													
9-11	0.520	9-10	0.620	9-9	0.750	9-9	0.770	9-9	0.970	9-9	0.970	9-10	1.460
1964		1964		1964		1964		1964		1964		1964	1.700

NOTES: Watershed conditions: Approximately 20% of the area dominated by desert shrubs (whitethorn, creosotebush, tarbush) with a crown spread of approximately 30% and an understory of grasses with a basal area of less than 1%. The remaining 80% of the area supports a grass cover (black grama, curly mesquite, sideoats grama) with a basal cover of about 2.5% interspersed with desert shrubs averaging less than 5% crown. For contour map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, p. 63.1-3. For geologic map (p. 63.1-4) and vegetation map (p. 63.1-5) of foregoing reference. Precipitation Data: Records began 1963. Monthly totals are Thiessen weighted averages of 10 rain gages, station averages are for 2 yr (1968-69). Runoff Data: Records began 1963, station averages are based on 1966, 1968 and 1969 data. Temperature Data: See table of daily maximum and minimum values included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY PRECIPITATION (inches)						TOMBSTONE, ARIZONA W-11							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.13	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.13E	
4	0.0	0.01E	0.0	0.0	0.18E	0.0	0.0	0.0	0.47	0.0	0.0	0.03	
5	0.0	0.06E	0.0	0.0	0.17E	0.0	0.0	0.48	0.00	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.49	0.0	0.0	0.0	0.0	
7	0.0	0.06E	0.10S	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.01	0.0	
11	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.28E	0.37	0.0	0.0	0.0	0.0	
13	0.0	0.34	0.0	0.0	0.03	0.0	0.0	0.79	0.09	0.0	0.0	0.0	
14	0.39	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.21E	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.0	0.11	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.00	0.03	0.0	0.0	0.0	0.30	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.00E	0.01E	0.0	0.0	0.0	0.0	0.65	0.0	0.0	0.27	0.0	0.0	
22	0.0	0.00E	0.06	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	
23	0.0	0.03E	0.0	0.0	0.0	0.0	0.08E	0.16	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	0.70	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.00E	0.29	0.0	0.0	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.16E	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.76E	0.06	0.0	0.0	0.0	0.11E	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.00E	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.08	0.0	0.0	0.0	0.0	
TOTAL	0.40	0.50	0.16	0.01	0.45	0.00	2.22	3.83	1.31	0.27	0.42	0.43	
STA AV	0.53	1.02	0.70	0.15	0.23	0.02	1.94	4.41	0.98	0.14	0.50	0.53	

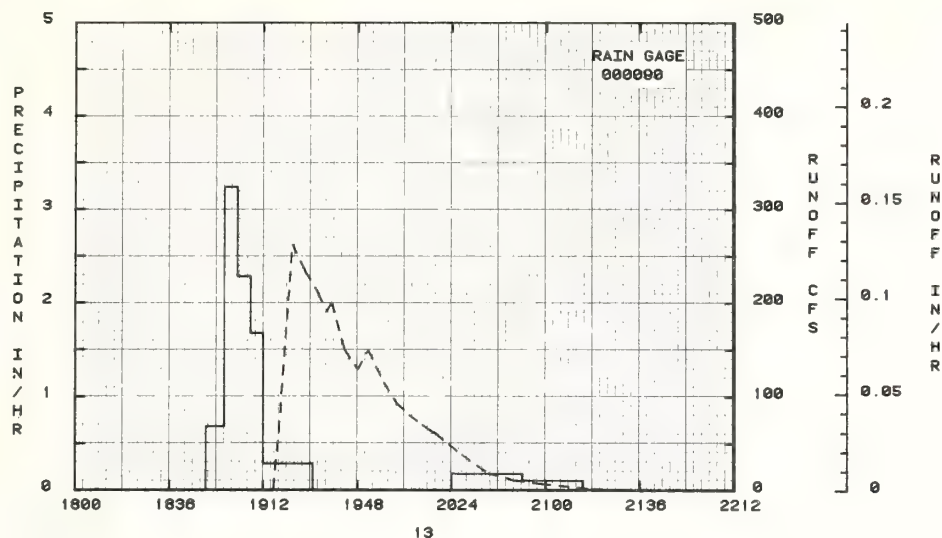
NOTES: Data are Thiessen weighted averages of 10 rain gages. STA AV are for 2 yr only (1968-69).

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA W-11												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.619	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.018	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.064	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.009	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.865E	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.178	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.535	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.091	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2274	0.1111	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.082	0.039	0.0	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.103	0.123	0.025	0.0	0.0	0.0

NOTES: To convert mean daily discharge values in CFS to IN/ DAY, multiply by 0.011695. STA AV values are for 3 yr only (1966, 1968 and 1969).

1969 SELECTED RUNOFF EVENT TOMBSTONE, ARIZONA W-11											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF AUGUST 13, 1969											
EG 000090											
8-13	0.0	0.0	8-13	1850	0.0	0.0	8-13	1915	0.0	0.0	
				1857	0.6857	0.08		1916	2.40	0.0	
				1902	3.2402	0.35		1918	63.49	0.0005	
				1907	2.2801	0.54		1923	262.36	0.0073	
				1912	1.6798	0.68		1928	233.33	0.0172	
WATERSHED CONDITIONS:											
Vegetative cover: Approximately 20% of the area is dominated by desert shrubs (whitethorn, creosotebush, tarbush) with a crown spread of approximately 30% cover and an understory of grasses with basal area of less than 1%. The remaining 80% of the area supports a grass cover (black grama, curly mesquite, sidecoats grama) with basal cover of about 2.5% interspersed with desert shrubs averaging less than 5% crown cover.											
				1931	0.2842	0.77		1933	209.66	0.0261	
				2024	0.0	0.77		1936	190.87	0.0311	
				2051	0.1778	0.85		1938	200.00	0.0344	
				2114	0.1043	0.89		1943	149.79	0.0414	
								1948	128.55	0.0470	
								1952	149.79	0.0515	
								1958	114.70	0.0580	
								2003	92.70	0.0621	
								2008	79.76	0.0657	
								2013	69.35	0.0687	
								2016	63.49	0.0703	
								2018	60.24	0.0712	
								2023	48.72	0.0735	
								2028	37.81	0.0752	
								2038	18.00	0.0775	
								2048	10.35	0.0786	
								2058	7.07	0.0793	
								2118	1.39	0.0800	
								2138	0.15	0.0801	
								2158	0.0	0.0801	

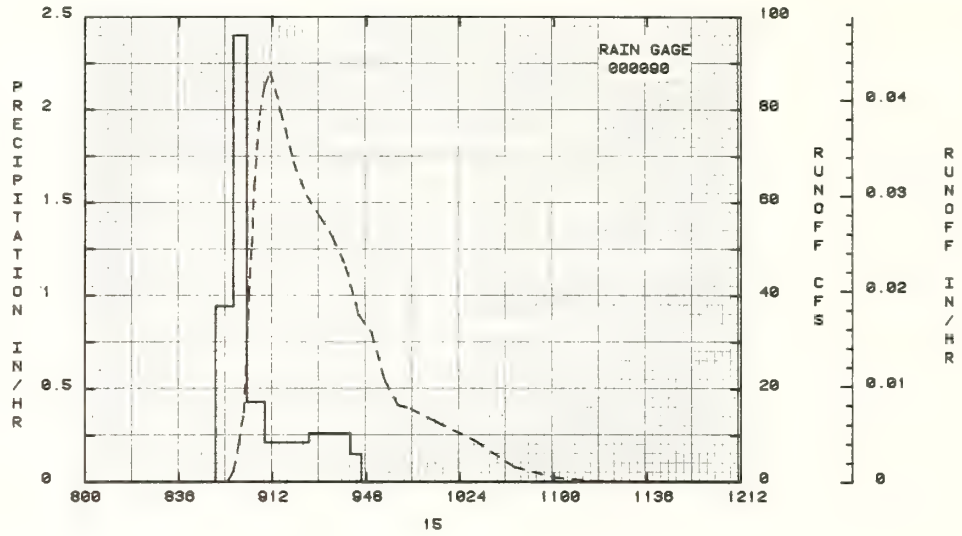
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000487.



EVENT OF AUGUST 13, 1969
TOMBSTONE, ARIZONA W-11

1969 SELECTED RUNOFF EVENT			TOMBSTONE, ARIZONA W-11						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF SEPTEMBER 15, 1969									
9-15	0.0	0.0	9-15	850	0.0	0.0	9-15	853	0.0
				857	0.9429	0.11		855	0.37
				902	2.4000	0.31		857	2.40
				909	0.4286	0.36		859	8.11
				926	0.2118	0.42		901	14.97
WATERSHED CONDITIONS: Vegetative cover: Approximately 20% of the area is dominated by desert shrubs (whitethorn, creosotebush, tarbush) with a crown spread of approximately 30% cover and an understory of grasses with basal area of less than 1%. The remaining 80% of the area supports a grass cover (black grama, curly mesquite, sideoats grama) with basal cover of about 2.5% interspersed with desert shrubs averaging less than 5% crown cover.				942	0.2625	0.49		903	39.85
				946	0.1500	0.50		904	50.63
								905	63.49
								907	78.86
								909	85.23
								911	88.00
								913	84.31
								915	79.76
								920	68.70
								925	61.54
								930	57.00
								935	52.54
								940	46.18
								945	35.81
								950	31.94
								955	21.73
								1000	16.45
								1005	15.70
								1015	12.90
								1030	8.74
								1045	3.17
								1100	1.00
								1115	0.21
								1145	0.01
								1215	0.0
									0.0247
									0.0255
									0.0261
									0.0273
									0.0286
									0.0293
									0.0296
									0.0297
									0.0297
									0.0297

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000487.



EVENT OF SEPTEMBER 15, 1969
TONBSTONE, ARIZONA W-11

TOMBSTONE, ARIZONA W-15

LOCATION: Cochise County; 3/4 miles east of Tombstone; Walnut Gulch, San Pedro River, Gila River, Colorado River Basin.

AREA: 5912.00 acres 9.24 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														TOMBSTONE, ARIZONA W-15															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.40	0.40	0.15	0.01	0.33	0.02	2.76	2.39	1.08	0.17	0.38	0.44	8.52															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.000	0.0	0.0	0.0	0.001															
STA AV	P	0.54	0.63	0.33	0.13	0.20	0.14	3.90	3.37	1.29	0.06	0.32	1.46	12.36															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.122	0.024	0.0	0.0	0.0	0.171															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																					
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		7-28	0.001	7-28	0.000	7-28	0.001	7-28	0.001	7-27	0.001	7-27	0.001	7-26	0.001	7-20	0.001												
MAXIMUMS FOR PERIOD OF RECORD																													
		8-31	0.181	8-19	0.130	8-19	0.170	8-19	0.200	8-19	0.200	8-19	0.230	8-19	0.250	8-19	0.250												
		1968		1966		1966		1966		1966		1966		1966		1966													

NOTES: Watershed conditions: Vegetative cover: Desert shrubs (whitethorn, creosotebush, tarbush) occupy 78% of the area with a crown spread of approximately 30% and an understory of grasses of less than 1% basal area. 22% of the area is in grass cover (black grama, tobosa grass, blue grama, sideoats grama, and curly mesquite grass) of approximately 2% basal area. For topographic, geologic, and vegetation maps, see pages 63.1-3, 63.1-4 and 63.1-5, respectively, of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226. Precipitation Data: Records began January 1965. Monthly totals Thiessen weighted averages of 15 rain gages. Runoff Data: Records began January 1965. Station averages for precipitation and runoff based on 1965-1969 record period. Temperature Data: For table of daily maximum and minimum values, see information included for Watershed 63.001. For long-time precipitation records, see U.S. Weather Bureau records at Tombstone, Arizona.

1969 DAILY PRECIPITATION (inches)													TOMBSTONE, ARIZONA W-15	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.15	0.0	0.0	0.13E		
4	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.05	0.0	0.0	0.04E		
5	0.0	0.08E	0.0	0.0	0.17E	0.02	0.0	0.73E	0.0	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.21E	0.0	0.0	0.0	0.0		
7	0.0	0.03E	0.10S	0.0	0.0	0.0	0.0	0.09E	0.01	0.0	0.00	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.05	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.19E	0.0	0.0	0.0	0.01	0.0		
11	0.0	0.0	0.0	0.01	0.00	0.0	0.0	0.0	0.00	0.0	0.0	0.00		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.21	0.0	0.0	0.0	0.0		
13	0.0	0.19E	0.0	0.0	0.01	0.0	0.0	0.23	0.24E	0.0	0.0	0.0		
14	0.38E	0.02E	0.0	0.0	0.0	0.0	0.13	0.01	0.17E	0.0	0.0	0.0		
15	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.46E	0.0	0.08	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.01	0.10	0.0	0.0	0.0	0.29	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.02E	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0		
21	0.00E	0.01E	0.0	0.0	0.0	0.0	0.19E	0.0	0.0	0.15	0.0	0.0		
22	0.0	0.00E	0.05	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.02E	0.0	0.0	0.0	0.0	0.16	0.12	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0		
25	0.02E	0.0	0.0	0.0	0.0	0.0	0.05	0.01	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.26E	0.21E	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.15E		
28	0.0	0.0	0.0	0.0	0.0	0.0	1.02E	0.05	0.0	0.02E	0.0	0.10E		
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.01E		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.01	0.0	0.0	0.0	0.0		
TOTAL	0.40	0.40	0.15	0.01	0.33	0.02	2.76	2.39	1.08	0.17	0.38	0.44		
STA AV	0.54	0.63	0.33	0.13	0.20	0.14	3.90	3.37	1.29	0.06	0.32	1.46		

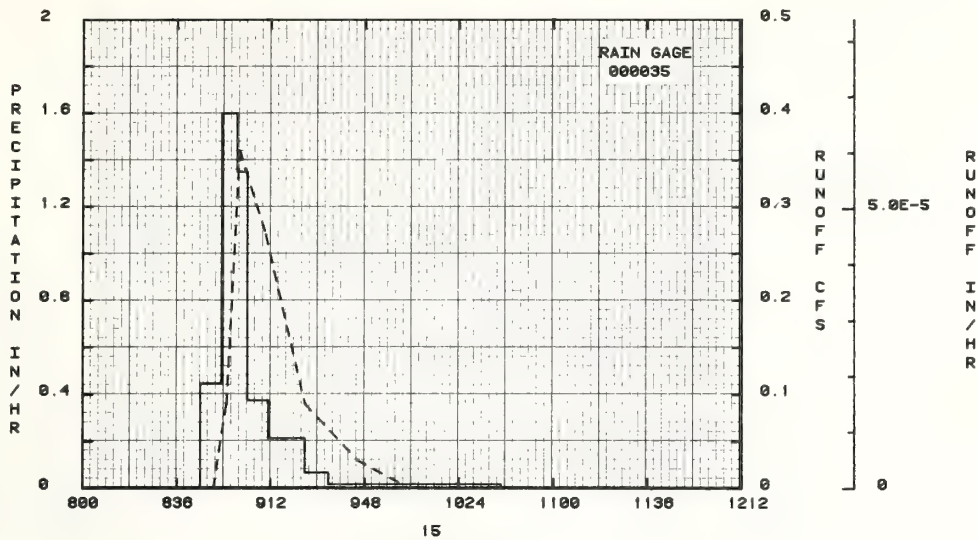
NOTES: Data are Thiessen weighted averages of 15 rain gages. STA AV are based on 5 yr record period (1965-69).

1969 MEAN DAILY DISCHARGE (cfs) TOMBSTONE, ARIZONA W-15												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.179	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0059	0.0	0.0002	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.000	0.0	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.0	0.0	0.025	0.122	0.024	0.0	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.004022. STA AV are based on 5 yr record period (1965-1969).

1969 SELECTED RUNOFF EVENT TOMBSTONE, ARIZONA W-15												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF SEPTEMBER 15, 1969												
9-15	BG 000035 0.0	0.0	9-15	BG 000035	0.0	0.0	9-15	850	0.0	0.0		
				845	0.4500	0.06		855	0.10	0.0		
				859	1.6000	0.22		900	0.36	0.0		
				903	1.3500	0.31		910	0.28	0.0		
				911	0.3750	0.36		925	0.10	0.0		
				925	0.2143	0.41		945	0.03	0.0		
				934	0.0667	0.42		1005	0.0	0.0		
				1040	0.0182	0.44						
WATERSHED CONDITIONS:												
Vegetative cover: Desert shrubs (whitethorn, creosote-bush, tarbush) occupy 78% of area with a crown spread of approximately 30% and an understory of grasses with less than 1% basal area. 22% of the area supports a grass cover (black grama, tobosa, blue grama, sideoats grama and curly mesquite) of approximately 2% basal area.												

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000168.



EVENT OF SEPTEMBER 15, 1969
TONSTONE, ARIZONA W-15

SANTA ROSA, NEW MEXICO WATERSHED W-1

LOCATION: Guadalupe and Quay Counties; 30 miles east of Santa Rosa; Alamogordo Creek, Tributary of Pecos River.

AREA: 42880.00 acres 67.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														SANTA ROSA, NEW MEXICO WATERSHED W-1															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.0	0.34	0.29	0.91	3.24	2.76	2.98	3.42	2.81	2.56	0.15	0.37	19.83															
	Q	0.0	0.0	0.0	0.0	0.110	0.041	0.063	0.040	0.139	0.015	0.000	0.0	0.407															
STA AV	P	0.35	0.25	0.53	0.78	1.85	1.63	3.66	2.60	1.46	1.61	0.33	0.24	15.27															
	Q	0.0	0.0	0.0	0.0	0.055	0.021	0.047	0.024	0.069	0.007	0.000	0.0	0.223															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days													
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		5-29	0.034	5-29	0.031	5-29	0.053	5-29	0.096	5-29	0.108	5-29	0.110	6- 1	0.110	6- 5	0.122												
MAXIMUMS FOR PERIOD OF RECORD																													
		5-29	0.034	5-29	0.031	5-29	0.053	5-29	0.096	5-29	0.108	5-29	0.110	6- 1	0.110	6- 5	0.122												
		1969		1969		1969		1969		1969		1969		1969		1969													

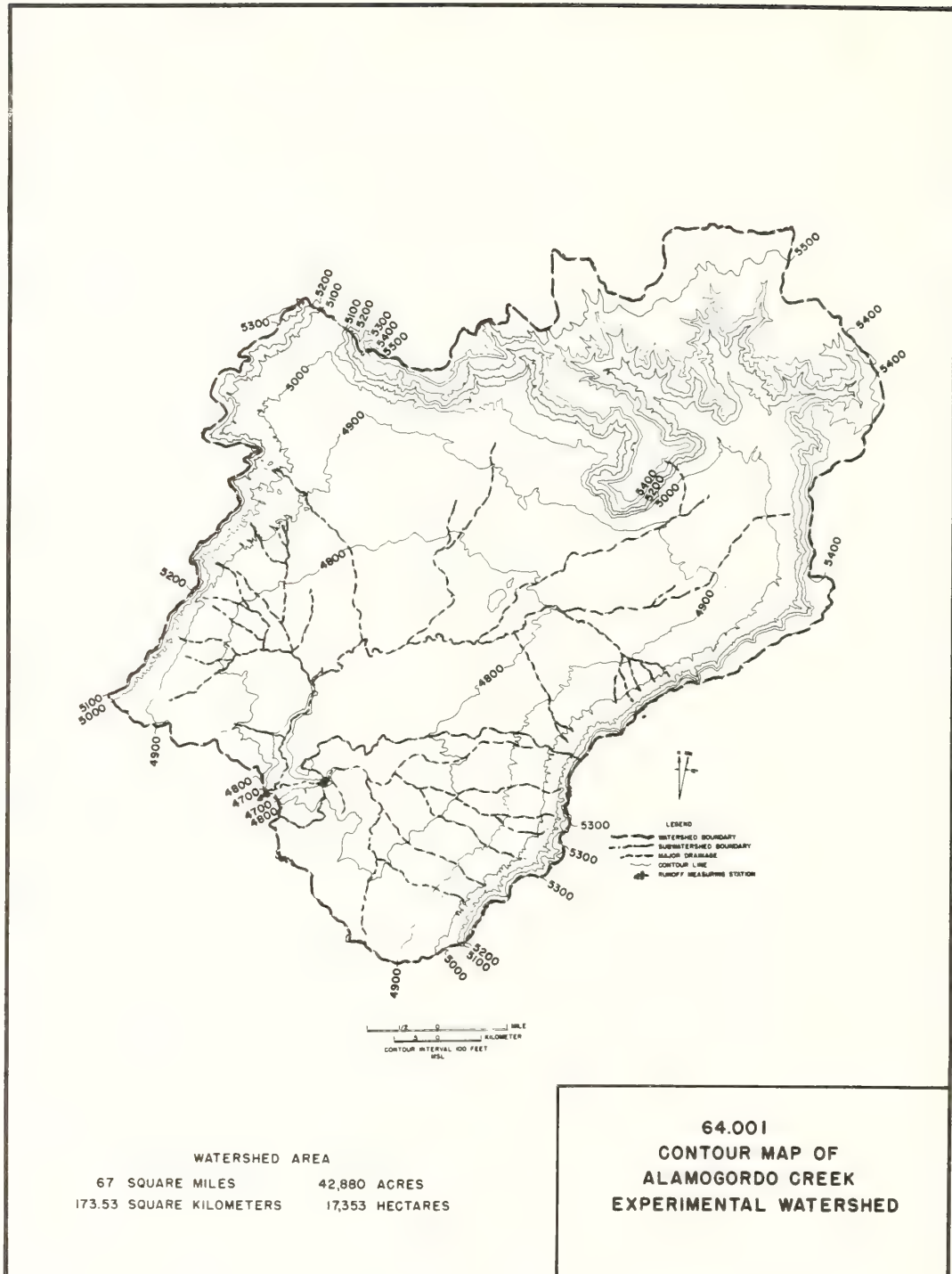
NOTES: Watershed conditions: Grazing land, about 75% of the area is grassland, vegetation consisting of blue grama, galleta, buffalo and ring molly. Remaining 25% of area is piñon, juniper, and various shrubs, with some grasses interspersed. Monthly precipitation values are Thiessen weighted averages of 49 rain gages. Precipitation and runoff records began in 1955. STA AV based on 2 yr (1968-69), previously published data are being reevaluated. Topographic map of watershed is included on p. 64.001-3 of this publication. For long-time precipitation records, see U.S. Weather Bureau records at Santa Rosa, New Mexico.

1969 DAILY PRECIPITATION (inches)														SANTA ROSA, NEW MEXICO WATERSHED W-1														
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.56E	0.0	0.09E	0.0															
	2	0.0	0.0	0.01S	0.0	0.0	0.03	0.0	0.15	0.0	0.0	0.03	0.0															
	3	0.0	0.0	0.01S	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0															
	4	0.0	0.0	0.10S	0.0	0.09E	0.0	0.0	0.08	0.14	0.0	0.0	0.13															
	5	0.0	0.0	0.03S	0.0	0.18E	0.0	0.07	0.0	0.0	0.0	0.0	0.20															
	6	0.0	0.0	0.0	0.0	0.27E	0.00	0.0	0.0	0.0	0.00	0.0	0.05S															
	7	0.0	0.0	0.0	0.0	0.0	0.12	0.33	0.03	0.24E	0.0	0.0	0.00S															
	8	0.0	0.0	0.0	0.0	0.0	0.12E	0.43E	0.0	0.71E	0.0	0.0	0.0															
	9	0.0	0.0	0.0	0.05	0.0	0.09E	0.07E	0.0	0.86	0.0	0.0	0.0															
	10	0.0	0.0	0.0	0.26	0.0	0.0	1.00E	0.0	0.21E	0.0	0.03	0.0															
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0															
	12	0.0	0.00	0.0	0.0	0.02	0.00	0.0	0.0	0.0	0.28E	0.0	0.0															
	13	0.0	0.32	0.0	0.14	0.04E	1.00E	0.00	0.0	0.0	0.0	0.0	0.0															
	14	0.0	0.00	0.01	0.0	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.0															
	15	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.0	0.0	0.0	0.0	0.0															
	16	0.0	0.0	0.0	0.46	0.93E	0.41E	0.09	0.0	0.0	0.0	0.0	0.0															
	17	0.0	0.0	0.0	0.0	0.0	0.45E	0.69E	0.0	0.01	0.0	0.0	0.0															
	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
	19	0.0	0.02E	0.0	0.0	0.0	0.0	0.0	0.01	0.08	0.0	0.0	0.0															
	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0															
	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.42E	0.0	0.0															
	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	1.27E	0.0	0.0															
	23	0.0	0.0	0.10	0.0	0.46E	0.0	0.23	0.23E	0.0	0.00	0.0	0.0															
	24	0.0	0.0	0.03	0.0	0.01	0.0	0.0	0.09	0.0	0.0	0.0	0.0															
	25	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.23E	0.0	0.0	0.0	0.0															
	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.36E	0.0	0.0															
	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.07E	0.0	0.0															
	28	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.14E	0.0	0.00	0.0	0.0															
	29	0.0	0.0	0.0	0.0	1.12E	0.0	0.0	0.16E	0.0	0.02	0.0	0.0															
	30	0.0	0.0	0.0	0.0	0.0	0.19	0.07	0.37E	0.0	0.00	0.0	0.0															
	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.65E	0.0	0.0	0.0	0.0															
	TOTAL	0.0	0.34	0.29	0.91	3.24	2.76	2.98	3.42	2.81	2.56	0.15	0.37															
	STA AV	0.35	0.25	0.53	0.78	1.85	1.63	3.66	2.60	1.46	1.61	0.33	0.24															

NOTES: Daily values are Thiessen weighted average amounts from 49 rain gages. Precipitation records began in 1955. STA AV are based on 2 yr (1968-1969).

1969 MEAN DAILY DISCHARGE (cfs) SANTA ROSA, NEW MEXICO WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	1.75E	0.0	58.62	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.00E	0.0	1.56	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	19.16E	0.0	0.0	0.10	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	1.05E	0.0	0.0	0.29E	0.0	0.0	0.0 E
5	0.0	0.0	0.0	0.0	0.0 E	0.00E	0.0	0.0	0.29E	0.0	0.04	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	7.95	0.0	0.45	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	5.58	0.0	9.56	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	8.55E	0.0	56.22	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	65.90	0.0	42.35	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.55E	0.0	77.92	0.0 T	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.00E	0.0	1.79	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	39.38E	0.0	0.0	0.27	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	1.64E	0.0	0.0	0.18	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.00E	0.0	0.0	0.02E	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.33E	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	11.49E	14.27	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.10E	8.91	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0 E	0.01	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.81	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.85	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	181.09	0.0	0.0	0.0	0.0	0.17	0.0	0.0
30	0.0	0.0	0.0	0.0	17.59E	0.74	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.03E	0.03E	0.0	71.21	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	6.4101	2.4631	3.6636	2.2972	8.3203	0.8685	0.0012	0.0
INCHES	0.0	0.0	0.0	0.0	0.110	0.041	0.063	0.040	0.139	0.015	0.000	0.0
STA AV	0.0	0.0	0.0	0.0	0.055	0.021	0.047	0.024	0.069	0.007	0.000	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000555. Runoff records began in 1955. STA AV based on 2 yr (1968-1969).



NEWELL, SOUTH DAKOTA WATERSHED W-2

LOCATION: Butte Co., South Dakota, 33 mi. NE of Newell, Sand Creek, South Moreau River Watershed.

AREA: 115.00 acres

		MONTHLY PRECIPITATION AND RUNOFF (inches)											NEWELL, SOUTH DAKOTA WATERSHED W-2	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.18	0.24	0.24	1.13	0.93	4.12	5.06	0.57	0.02	0.23	0.07	0.28	13.07
	Q	0.0	0.0	0.325	0.090	0.0	0.074	0.761	0.0	0.0	0.0	0.0	0.0	1.250
STA AV	P	0.20	0.24	0.43	1.09	2.01	3.36	1.93	1.04	1.06	0.40	0.28	0.26	12.30
	Q	0.008	0.067	0.152	0.016	0.092	0.090	0.155	0.0	0.008	0.0	0.0	0.0	0.587

NOTES: Watershed conditions: 100% rangeland; Condition classes: excellent - 19%; good - 64%; fair - 17%; Degree of grazing: moderate. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 65.2-4. Precipitation from rain gage W-2A. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969		DAILY PRECIPITATION (inches)											NEWELL, SOUTH DAKOTA WATERSHED W-2	
Day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.02	0.03	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.02	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.08	0.0	0.0	0.0	0.53	1.36	0.0	0.0	0.04	0.0	0.0	
7	0.01	0.08	0.0	0.10	0.0	0.0	0.35	0.18	0.0	0.0	0.0	0.0	0.02S	
8	0.0	0.0	0.06	0.01	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	
11	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.02	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.06	0.0	0.0	
14	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.79	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.17	0.0	0.0	0.0	1.50	0.01	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.02	0.0	0.04	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.06	0.0	0.01	0.04	0.0	0.0	0.69	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.02	0.0	0.0	0.39	0.12	0.0	0.0	0.0	0.02	0.0	0.0	0.02	
22	0.0	0.0	0.0	0.0	0.0	0.86	0.0	0.0	0.0	0.0	0.0	0.0	0.08	
23	0.0	0.0	0.04	0.0	0.0	0.11	0.02	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.02	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.30	0.0	0.78	0.16	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.04	0.0	0.16	0.0	0.30	0.02	0.0	0.0	0.0	0.0	0.0	0.06	
27	0.05	0.02	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.0		0.03	0.06			0.06	0.40		0.0			0.07	
TOTAL		0.18	0.24	0.24	1.13	0.93	4.12	5.06	0.57	0.02	0.23	0.07	0.28	
STA AV		0.20	0.24	0.43	1.09	2.01	3.36	1.93	1.04	1.06	0.40	0.28	0.26	

NOTES: Precipitation from rain gage W-2A. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NEWELL, SOUTH DAKOTA WATERSHED W-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.082	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.058	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.053	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.063	0.0	0.019	0.072	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.053	0.0	0.0	0.473	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.053	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	3.049	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.029	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.478	0.024	0.0	0.304	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.990	0.014	0.0	0.014	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.072	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.029	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0507	0.0145	0.0	0.0119	0.1186	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.325	0.090	0.0	0.078	0.761	0.0	0.0	0.0	0.0	0.0
STA AV	0.008	0.067	0.152	0.016	0.092	0.090	0.155	0.0	0.008	0.0	0.0	0.0

NOTES: STA AV based on 12 yr (1958-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.20697.

NEWELL, SOUTH DAKOTA WATERSHED W-5

LOCATION: Butte Co., South Dakota, 34 mi. NE of Newell, South Moreau River Watershed.

AREA: 46.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)						NEWELL, SOUTH DAKOTA WATERSHED W-5							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969 P	0.08	0.38	0.38	1.28	1.10	3.21	3.40	0.20	0.15	0.24	0.17	0.51	11.10
Q	20.002	0.0	1.260	0.075	0.0	0.073	0.245	0.0	0.0	0.0	0.0	0.0	1.655
STA AV P	0.23	0.31	0.58	1.43	2.52	4.37	1.94	1.42	1.07	0.39	0.33	0.38	14.95
Q	0.017	0.027	0.213	0.023	0.082	0.263	0.062	0.088	0.006	0.0	0.0	0.0	0.780

NOTES: Watershed conditions: 100% rangeland; Condition classes: excellent - 7%; good - 93%; Degree of grazing: moderate; Production of cover: 2245 pounds per acre of oven-dry material. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 65.5-4. Precipitation from rain gage W-5A. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969	DAILY PRECIPITATION (inches)						NEWELL, SOUTH DAKOTA WATERSHED W-5						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.035	0.0	
2	0.0	0.0	0.08S	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.04S	0.0	
3	0.0	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.20	1.13	0.0	0.0	0.0	0.0	0.0	
7	0.0	0.08S	0.0	0.11	0.0	0.48	1.01	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.05S	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03S	
9	0.0	0.0	0.03S	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.01S	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11S	0.05S	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.05S	0.03S	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.37S	0.0	0.0	0.0	0.04S	0.0	0.0	
14	0.0	0.0	0.0	0.10S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.04S	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.05S	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.02S	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.04S	0.12	0.0	0.0	0.08	0.0	0.37	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.65	0.07	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.13S	
23	0.0	0.0	0.05S	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.08S	0.04S	0.0	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.70S	0.0	0.45	0.0	0.0	0.0	0.02S	0.0	0.10S	
26	0.0	0.10S	0.0	0.18S	0.0	0.25	0.40	0.0	0.0	0.02S	0.0	0.13S	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.10S	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.07S	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.02S	
TOTAL	0.08	0.38	0.38	1.28	1.10	3.21	3.40	0.20	0.15	0.24	0.17	0.51	
STA AV	0.23	0.31	0.58	1.43	2.52	4.37	1.94	1.42	1.07	0.39	0.33	0.38	

NOTES: Precipitation from rain gage W-5A. STA AV based on 12 yr (1958-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)						NEWELL, SOUTH DAKOTA WATERSHED W-5					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.004	0.0	0.0	0.0	0.0	0.0	0.114	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.350	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	1.059	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	1.305	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.023	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.027	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.060	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.010	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.108	0.0	0.081	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.027	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0001	0.0	0.0786	0.0048	0.0	0.0047	0.0153	0.0	0.0	0.0	0.0	0.0
INCHES	0.002	0.0	1.260	0.075	0.0	0.073	0.245	0.0	0.0	0.0	0.0	0.0
STA AV	0.017	0.027	0.213	0.023	0.082	0.263	0.062	0.088	0.006	0.0	0.0	0.0

NOTES: STA AV based on 12 yr (1958-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.51743.

NEWELL, SOUTH DAKOTA WATERSHED W-7

LOCATION: Butte Co., South Dakota, 35 mi. NE of Newell, Tributary Trail Creek, South Moreau Watershed.

AREA: 160.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													NEWELL, SOUTH DAKOTA WATERSHED W-7	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.08	0.21	0.31	1.19	1.31	3.03	3.16	0.20	0.27	0.31	0.20	0.29	10.56
	Q	0.078	0.0	0.481	0.011	0.001	0.0	0.023	0.0	0.001	0.0	0.0	0.0	0.595
STA AV	P	0.20	0.27	0.55	1.22	2.34	3.85	1.85	1.27	0.97	0.37	0.33	0.33	13.53
	Q	0.023	0.017	0.165	0.017	0.033	0.102	0.030	0.016	0.002	0.0	0.0	0.0	0.406

NOTES: Watershed conditions: 100% rangeland; Condition classes: good - 82%; fair - 18%; Degree of grazing: moderate. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 65.7-4. Precipitation from rain gage W-7A. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969 DAILY PRECIPITATION (inches)													NEWELL, SOUTH DAKOTA WATERSHED W-7	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03S	0.0		
2	0.0	0.0	0.04S	0.0	0.30	0.0	0.0	0.0	0.0	0.06	0.05S	0.0		
3	0.0	0.0	0.01S	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.02S	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.02	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.0	0.32	0.81	0.0	0.0	0.07	0.0	0.0		
7	0.0	0.04S	0.0	0.10	0.0	0.21	0.82	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.05S	0.17	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.01S	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.02S		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S	0.05S	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.02S	0.03S	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.35S	0.0	0.0	0.0	0.08S	0.0	0.0		
14	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.04S	0.0	0.0	0.0	0.08	0.0	0.38	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.07	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.02S	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.03S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.04S	0.07S	0.0	0.0	0.11	0.0	0.51	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.62	0.07	0.04	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.20	0.05	0.0	0.0	0.0	0.0	0.12S		
23	0.0	0.0	0.05S	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.02S	0.0	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.05S	0.0	0.60S	0.0	0.22	0.0	0.0	0.0	0.02	0.0	0.02S		
26	0.0	0.05S	0.0	0.15	0.0	0.33	0.25	0.0	0.0	0.02	0.0	0.08S		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04S		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.07S	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.01S			
TOTAL	0.08	0.21	0.31	1.19	1.31	3.03	3.16	0.20	0.27	0.31	0.20	0.29		
STA AV	0.20	0.27	0.55	1.22	2.34	3.85	1.85	1.27	0.97	0.37	0.33	0.33		

NOTES: Precipitation from rain gage W-7A. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NEWELL, SOUTH DAKOTA WATERSHED W-7												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.524	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.148	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0
18	0.0	0.0	1.781	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	1.284	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.047	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.040	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.081	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0169	0.0	0.1043	0.0025	0.0002	0.0	0.0050	0.0	0.0002	0.0	0.0	0.0
INCHES	0.078	0.0	0.481	0.011	0.001	0.0	0.023	0.0	0.001	0.0	0.0	0.0
STA AV	0.023	0.017	0.165	0.017	0.033	0.102	0.030	0.016	0.002	0.0	0.0	0.0

NOTES: STA AV based on 12 yr (1958-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.14876.

NEWELL, SOUTH DAKOTA WATERSHED W-12

LOCATION: Butte Co., South Dakota, 9 mi. East of Newell, Belle Fourche River Watershed.

AREA: 90.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													NEWELL, SOUTH DAKOTA WATERSHED W-12	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.22	0.17	0.26	1.57	1.74	1.99	1.98	0.39	0.22	0.35	0.28	0.25	9.42
	Q	0.355	0.0	0.498	1.211	0.134	0.005	0.0	0.0	0.0	0.0	0.0	0.0	2.203
STA AV	P	0.28	0.25	0.61	1.36	2.41	3.43	1.65	1.00	1.21	0.46	0.34	0.30	13.30
	Q	0.073	0.053	0.408	0.276	0.778	0.669	0.109	0.050	0.016	0.0	0.009	0.008	2.450

NOTES: Watershed conditions: 100% rangeland; Condition classes: good - 94%; fair - 6%; Degree of grazing: moderate. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 65.12-4. Precipitation from rain gage W-12A. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969 DAILY PRECIPITATION (inches)													NEWELL, SOUTH DAKOTA WATERSHED W-12	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.02	0.0	0.03S	0.02S	0.0		
2	0.0	0.0	0.05S	0.0	0.0	0.0	0.04	0.0	0.0	0.04S	0.08S	0.0		
3	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.10	0.0	0.0	0.0		
5	0.01S	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0		
6	0.0	0.0	0.01S	0.0	0.0	0.0	0.02	0.0	0.0	0.06S	0.0	0.0		
7	0.01S	0.08S	0.03S	0.08	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.03S		
8	0.0	0.02S	0.04S	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.01S	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.67	0.22	0.0	0.0	0.0	0.04S	0.01S		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.04	0.0	0.06S	0.14S	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.15S	0.0	0.0		
14	0.0	0.0	0.0	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.02S	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.34	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.02	0.0	0.0	0.0		
18	0.0	0.0	0.02S	0.0	0.02	0.0	0.10	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.08	0.03	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.03	0.0	0.0	0.0	0.05	0.88	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.07	0.0	0.0	0.02S		
22	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.08S		
23	0.0	0.0	0.04S	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.03	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.40S	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.04	0.0	0.19S	0.03	0.32	0.0	0.0	0.0	0.0	0.0	0.02S		
27	0.09S	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S		
28	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.07S		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.0		0.02S		0.0		0.07	0.33		0.0		0.07S		
TOTAL		0.22	0.17	0.26	1.57	1.74	1.99	1.98	0.39	0.22	0.35	0.28	0.25	
STA AV		0.28	0.25	0.61	1.36	2.41	3.43	1.65	1.00	1.21	0.46	0.34	0.30	

NOTES: Precipitation from rain gage W-12A. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NEWELL, SOUTH DAKOTA WATERSHED N-12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.461	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.189	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.174	0.507	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.091	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	1.342	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.238	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.384	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.378	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.064	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.026	0.223	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.037	1.252	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.337	0.170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.140	1.066	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.015	0.752	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.011	0.178	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.113	0.0	0.0		0.0	0.0		0.0		0.0
MEAN	0.0433	0.0	0.0607	0.1526	0.0169	0.0006	0.0	0.0	0.0	0.0	0.0	0.0
INCHES	0.355	0.0	0.498	1.211	0.134	0.005	0.0	0.0	0.0	0.0	0.0	0.0
STA 1V	0.073	0.053	0.377	0.253	0.831	0.669	0.109	0.050	0.016	0.0	0.009	0.008

NOTES: STA 1V based on 12 yr (1968-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.26446.

NEWELL, SOUTH DAKOTA WATERSHED W-13

LOCATION: Meade Co., South Dakota, 26 mi. East of Newell, South Fork Sulphur Creek, Cheyenne River Watershed.

AREA: 160.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)						NEWELL, SOUTH DAKOTA WATERSHED W-13								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.13	0.26	0.15	1.91	1.42	2.58	3.93	0.69	0.06	0.23	0.13	0.25	11.74
	Q	0.0	0.0	0.764	0.322	0.227	0.010	0.017	0.0	0.0	0.0	0.0	0.0	1.340
STA AV	P	0.23	0.26	0.47	1.20	2.36	3.41	1.58	1.03	0.89	0.40	0.28	0.31	12.43
	Q	0.0	0.063	0.260	0.052	0.311	0.310	0.001	0.0	0.0	0.0	0.0	0.0	0.997

NOTES: Watershed conditions: 100% rangeland; Condition classes: excellent - 8%; good - 67%; fair - 25%; Degree of grazing: moderate. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub 945, p. 65.13-4. Thiessen weighted precipitation from gages W-13B and W-13C. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969 DAILY PRECIPITATION (inches)						NEWELL, SOUTH DAKOTA WATERSHED W-13							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05S	0.0	
2	0.01S	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.04S	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.01S	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.06	0.0	0.0	0.0	
5	0.01S	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.24	0.32	0.0	0.0	0.04	0.0	0.0	
7	0.0	0.10S	0.03S	0.24	0.0	0.10	0.32	0.0	0.0	0.0	0.0	0.04S	
8	0.02S	0.0	0.01S	0.26	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.35	0.17	0.0	0.0	0.0	0.08S	0.04S	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0	0.0	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	
14	0.0	0.0	0.0	0.26	0.0	0.36	0.08	0.0	0.0	0.0	0.0	0.0	
15	0.03S	0.0	0.0	0.0	0.12	0.0	0.28	0.0	0.0	0.0	0.0	0.0	
16	0.01S	0.0	0.0	0.23	0.03	0.0	0.84	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.10	0.0	0.17	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.06S	0.0	0.0	0.0	0.06	0.95	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.24	0.06	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.02S	0.0	0.0	0.0	0.0	0.03	0.33	0.0	0.0	0.0	0.0	0.08S	
23	0.0	0.0	0.05S	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	
24	0.02S	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.48	0.0	0.03	0.08	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.10S	0.0	0.24	0.0	0.27	0.0	0.0	0.0	0.0	0.0	0.05S	
27	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S	
28	0.0	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S	0.0	0.02S	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.02	0.0	0.0	0.69	0.0	0.02S	0.02S	0.0	0.0	
TOTAL	0.13	0.26	0.15	1.91	1.42	2.58	3.93	0.69	0.06	0.23	0.13	0.25	
STA AV	0.23	0.26	0.47	1.20	2.36	3.41	1.58	1.03	0.89	0.40	0.28	0.31	

NOTES: Thiessen weighted precipitation from gages W-13B and W-13C. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NEWELL, SOUTH DAKOTA WATERSHED W-13												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.168	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.988	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.497	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.067	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.040	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	3.482	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.249	0.0	0.0	0.0	0.074	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.403	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.612	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.155	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.134	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.181	0.081	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.847	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.585	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.054	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.1657	0.0722	0.0492	0.0022	0.0037	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.764	0.322	0.227	0.010	0.017	0.0	0.0	0.0	0.0	0.0
STA AV	0.0	0.063	0.260	0.052	0.311	0.310	0.001	0.0	0.0	0.0	0.0	0.0

NOTES: STA AV based on 12 yr (1958-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.14876.

NEWELL, SOUTH DAKOTA WATERSHED W-14

LOCATION: Butte Co., South Dakota, 16 mi. SE of Newell, Belle Fourche River Watershed.

AREA: 35.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													NEWELL, SOUTH DAKOTA WATERSHED W-14	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.13	0.84	0.55	1.75	1.48	2.21	4.88	0.25	0.35	0.31	0.27	0.56	13.58
	Q	0.0	0.0	0.728	0.544	0.057	0.012	0.374	0.0	0.0	0.0	0.0	0.0	1.715
STA AV	P	0.38	0.35	0.68	1.70	2.30	3.20	2.03	1.03	1.11	0.49	0.38	0.42	14.08
	Q	0.077	0.043	0.274	0.149	0.247	0.318	0.157	0.017	0.008	0.0	0.008	0.0	1.299

NOTES: Watershed conditions: 100% rangeland; Condition classes: good - 54%; fair - 46%; Degree of grazing moderate. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 65.14-4. Precipitation from rain gage W-14A. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969 DAILY PRECIPITATION (inches)													NEWELL, SOUTH DAKOTA WATERSHED W-14	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.06S	0.0	0.0		
2	0.03S	0.0	0.12S	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.12S	0.0		
3	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.04S	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.0	0.03	0.10	0.0	0.0	0.0	0.0	0.05S		
7	0.05S	0.28S	0.12S	0.17	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.11S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S		
9	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.01S	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.57	1.50	0.0	0.0	0.0	0.01S	0.04S		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05S	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.02S	0.08S	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.14S	0.01S	0.0		
14	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	0.0	0.0	0.15	0.0	0.31	0.0	0.0	0.0	0.0	0.0		
16	0.05S	0.0	0.0	0.26	0.0	0.0	1.92	0.0	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.05	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.09S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.12S	0.0	0.0	0.05	0.02	0.10	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.10S	0.0	0.0	0.32	0.0	0.0	0.0	0.05	0.0	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.02	0.18	0.0	0.03	0.0	0.0	0.10S		
23	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.12S	0.0	0.0	0.85	0.0	0.0	0.08	0.04S	0.0	0.0		
25	0.0	0.0	0.0	0.66	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.14	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.23S	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10S		
28	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04S		
29	0.0	0.0	0.05S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08S		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.03S		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.08	0.0	0.0	0.0	0.10S		
TOTAL		0.13	0.84	0.55	1.75	1.48	2.21	4.88	0.25	0.35	0.31	0.27	0.56	
STA AV		0.38	0.35	0.68	1.70	2.30	3.20	2.03	1.03	1.11	0.49	0.38	0.42	

NOTES: Precipitation from rain gage W-14A. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NEWELL, SOUTH DAKOTA WATERSHED #14												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.046	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.015	0.049	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.035	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.004	0.0	0.0	0.534	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.896	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.006	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.012	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.046	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.022	0.263	0.0	0.006	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.110	0.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.004	0.274	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.004	0.079	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.034		0.0		0.0	0.0		0.0		0.0
MEAN	0.0	0.0	0.0345	0.0267	0.0027	0.0006	0.0177	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.728	0.544	0.057	0.012	0.374	0.0	0.0	0.0	0.0	0.0
STA AV	0.077	0.043	0.274	0.149	0.247	0.318	0.157	0.017	0.008	0.0	0.008	0.0

NOTES: STA AV based on 12 yr (1958-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.68005.

NEWELL, SOUTH DAKOTA WATERSHED W-15

LOCATION: Butte Co., South Dakota, 16 mi. SE of Newell, Belle Fourche River Watershed.

AREA: 115.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)						NEWELL, SOUTH DAKOTA WATERSHED W-15								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.08	0.54	0.17	1.89	1.43	2.24	4.78	0.26	0.32	0.29	0.19	0.32	12.51
	Q	0.0	0.0	0.426	0.473	0.053	0.008	0.313	0.0	0.0	0.0	0.0	0.0	1.273
STA AV	P	0.41	0.30	0.67	1.71	2.38	3.24	2.10	1.00	1.09	0.52	0.38	0.38	14.19
	Q	0.064	0.020	0.142	0.151	0.321	0.269	0.168	0.008	0.008	0.0	0.008	0.0	1.160

NOTES: Watershed conditions: 100% rangeland; Condition classes: good - 41%; fair - 59%; Degree of grazing: moderate. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub 945, p. 65.15-4. Precipitation from rain gage W-15A. Precipitation and runoff records began January 1958. Precipitation and runoff STA AV based on 12 yr (1958-69) record period. For long-time precipitation records, see U.S. Weather Bureau Station records at Newell, South Dakota.

1969 DAILY PRECIPITATION (inches)						NEWELL, SOUTH DAKOTA WATERSHED W-15							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.04S	0.0	0.0	
2	0.01S	0.0	0.06S	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.08S	0.0	
3	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.04S	0.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.02	0.07	0.0	0.0	0.0	0.0	0.01S	
7	0.04S	0.14S	0.03S	0.20	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.06S	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01S	
9	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.01S	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.61	1.50	0.0	0.0	0.0	0.01S	0.03S	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03S	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.02S	0.06S	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.14S	0.01S	0.0	
14	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.0	0.0	0.15	0.0	0.25	0.0	0.0	0.0	0.0	0.0	
16	0.03S	0.0	0.0	0.28	0.0	0.0	1.77	0.0	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.03	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.02S	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.07S	0.0	0.0	0.04	0.02	0.10	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.08S	0.0	0.0	0.30	0.0	0.0	0.0	0.05	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.02	0.15	0.0	0.01	0.0	0.0	0.07S	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.04S	0.0	0.0	0.86	0.0	0.0	0.10	0.04S	0.0	0.0	
25	0.0	0.07S	0.0	0.77	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.14	0.0	0.31	0.0	0.0	0.0	0.0	0.0	0.0	
27	0.0	0.12S	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05S	
28	0.0	0.0	0.01S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S	
29	0.0	0.0	0.01S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02S	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.03S	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.10	0.0	0.0	0.0	0.08S	
TOTAL		0.08	0.54	0.17	1.89	1.43	2.24	4.78	0.26	0.32	0.29	0.19	0.32
STA AV		0.41	0.30	0.67	1.71	2.38	3.24	2.10	1.00	1.09	0.52	0.38	0.38

NOTES: Precipitation from rain gage W-15A. STA AV based on 12 yr (1958-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NEWELL, SOUTH DAKOTA WATERSHED W-15												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.256	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.029	0.237	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	1.063	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.077	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.014	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.014	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.106	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	1.995	2.266	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.053	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0	0.0	0.0664	0.0762	0.0083	0.0013	0.0488	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.426	0.473	0.053	0.008	0.313	0.0	0.0	0.0	0.0	0.0
STA AV	0.064	0.020	0.142	0.151	0.321	0.269	0.168	0.008	0.008	0.0	0.008	0.0

NOTES: STA AV based on 12 yr (1958-69) record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 0.20697.

NORTH DANVILLE, VERMONT WATERSHED W-1

LOCATION: Caledonia County, Vermont, 5 mi. SW of St. Johnsbury; Sleepers River, Connecticut River Basin.

AREA: 10611.20 acres 16.58 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														NORTH DANVILLE, VERMONT WATERSHED W-1													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual														
1969 P	3.09	3.71	2.69	3.68	4.62	4.77	5.01	4.09	3.88	3.19	7.32	6.18	52.23														
Q	0.889	0.680	1.034	8.417	5.049	1.696	1.057	1.131	0.430	0.570	2.486	1.858	25.296														
STA AV P	2.85	3.27	3.28	3.64	3.74	4.10	3.90	4.47	3.21	4.27	4.80	3.82	45.36														
Q	0.869	0.787	1.630	6.288	2.674	0.988	0.548	0.479	0.425	1.274	1.639	1.390	18.992														
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
	Maximum Discharge Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	6 Hours Date	Vol.	12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.											
1969	5-20	0.063	5-20	0.060	5-20	0.115	5-20	0.283	5-20	0.477	4-18	0.680	4-17	1.135	4-13	3.430											
MAXIMUMS FOR PERIOD OF RECORD																											
	10-24 1959	0.100	10-24 1959	0.100	10-24 1959	0.200	10-24 1959	0.500	10-24 1959	0.780	10-24 1959	1.150	10-24 1959	1.450	4-12 1960	3.860											

NOTES: Watershed conditions: Predominately hardwood forest, 64%; cultivated-16% in long hay rotations and about 1% in row crops, total 17%; pasture, largely bluegrass 15%; idle land in grass and woody plants, 3%; and homesites and roads, 1%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 67.1-4. Precipitation records began January 1, 1959. Runoff records began October 1959. Part-year values not included in STA AV. For long-time precipitation records, see U.S. Weather Bureau records at St. Johnsbury, Vt.

1969 DAILY AIR TEMPERATURE (degrees F)														NORTH DANVILLE, VERMONT WATERSHED W-1													
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec				
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min			
1	21	2	27	16	39	8	27	4	54	29	69	34	72	52	77	57	80	57	62	40	42	29	32	16			
2	11	1	31	23	33	11	31	16	62	28	77	49	69	44	77	60	68	56	64	38	45	34	20	4			
3	18	-2	27	20	28	25	28	6	60	42	68	50	70	45	78	60	66	50	62	48	58	42	24	2			
4	20	0	22	4	26	10	42	15	55	33	56	40	74	45	70	58	75	54	49	36	55	41	18	12			
5	16	-8	2	-4	14	2	36	30	47	28	65	34	75	58	71	59	73	48	68	28	47	40	21	13			
6	22	-6	18	-4	20	-4	36	20	54	32	60	50	61	42	76	57	76	62	68	30	44	36	20	6			
7	30	21	20	0	20	-2	42	16	50	28	66	44	64	39	79	53	72	58	63	44	53	42	25	0			
8	20	5	29	-5	22	13	37	22	52	34	63	44	69	38	77	61	59	55	66	50	57	44	33	20			
9	12	-6	24	7	26	9	44	18	60	49	66	38	70	40	74	56	60	53	62	37	56	40	34	30			
10	20	0	20	14	22	17	46	36	48	32	72	42	66	46	68	54	55	39	65	31	46	38	33	30			
11	13	-12	16	4	19	11	38	30	52	30	73	54	74	53	70	52	61	36	61	37	46	40	51	33			
12	18	9	29	12	21	10	40	27	52	35	78	50	70	59	72	47	67	46	66	44	43	39	36	30			
13	22	10	26	12	30	18	50	23	50	34	82	58	68	56	76	50	64	46	55	41	42	26	31	14			
14	22	15	12	0	32	25	59	31	51	30	80	60	70	56	80	58	68	44	58	39	36	26	28	10			
15	22	8	11	2	33	25	66	34	56	31	62	57	83	50	78	62	72	57	49	28	40	25	23	18			
16	28	-6	15	0	32	18	52	40	71	35	60	45	86	59	83	64	74	53	53	26	31	20	19	12			
17	24	2	29	-6	29	13	54	42	77	48	68	42	82	66	77	64	64	44	52	36	38	18	18	10			
18	35	22	33	4	42	27	43	37	57	45	69	45	80	60	80	61	54	37	49	38	44	30	16	6			
19	35	22	32	24	37	28	37	30	60	46	70	56	72	52	70	54	57	30	56	40	45	38	22	16			
20	34	7	38	24	36	29	38	26	64	51	64	49	71	50	62	44	59	29	56	42	44	24	18	8			
21	30	0	39	20	33	30	48	24	52	34	66	42	70	60	60	43	62	33	50	33	24	10	22	6			
22	42	10	40	16	33	26	45	37	58	32	68	42	73	52	67	38	67	33	33	27	20	5	24	14			
23	40	10	35	18	42	20	45	33	56	40	58	50	75	46	76	46	67	41	27	20	32	17	13	-7			
24	40	30	28	23	46	20	38	33	50	46	54	50	73	50	79	58	63	43	34	18	30	12	10	-16			
25	36	18	25	22	38	32	49	28	62	40	60	46	70	46	74	53	56	47	38	30	29	4	7	-21			
26	17	0	28	22	38	30	46	26	48	30	74	42	60	56	61	46	53	47	42	32	33	16	24	4			
27	6	-14	24	18	30	20	62	34	58	25	86	58	67	57	66	38	68	47	42	30	28	1	30	18			
28	16	-18	32	10	34	13	71	38	70	37	82	65	71	60	70	48	60	40	48	24	28	-4	19	16			
29	18	0			32	20	50	35	70	51	70	51	75	66	74	56	51	35	43	21	34	22	23	5			
30	30	18			22	14	52	36	68	49	75	47	78	64	76	48	62	30	47	20	30	15	18	4			
31	33	24			22	10			60	40			80	57	81	54			45	20			16	-4			
AV.	24	5	23	9	30	17	43	26	57	37	66	46	72	52	73	53	62	43	52	33	38	24	23	10			
MEAN	14.8		16.3		23.6		35.2		47.3		56.4		62.3		63.6		53.0		43.0		31.8		16.8				
STA AV	23	4	23	3	34	15	46	27	58	37	71	46	74	52	72	49	64	42	53	34	38	22	24	9			

NOTES: Temperature data is from R-12 station. Readings taken daily from hygrothermograph charts. STA AV based on 1960-69 record period.

1969 DAILY PRECIPITATION (inches) NORTH DANVILLE, VERMONT WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.35	0.08	0.0	0.21	0.0	0.0	0.04	0.09	0.10	0.0	0.0	0.05
2	0.06	0.0	0.0	0.34	0.0	0.0	0.0	0.11	0.01	0.23	0.47	0.0
3	0.01	0.54	0.13	0.0	0.0	0.53	0.0	0.01	0.0	0.37	0.27	0.09
4	0.02	0.24	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	1.61	0.08
5	0.0	0.05	0.0	0.23	0.0	0.03	0.14	0.80	0.0	0.0	1.24	0.08
6	0.0	0.05	0.0	0.0	0.0	0.41	0.0	0.49	0.84	0.0	0.36	0.0
7	0.70	0.0	0.0	0.0	0.10	0.0	0.0	0.0	1.39	0.0	0.26	0.0
8	0.15	0.0	0.14	0.0	0.30	0.0	0.0	0.20	0.30	0.09	0.28	0.18
9	0.04	0.39	0.02	0.0	0.45	0.0	0.0	0.04	0.02	0.0	0.05	0.35
10	0.11	0.45	0.09	0.47	0.03	0.0	0.15	0.50	0.03	0.0	0.02	0.17
11	0.06	0.0	0.08	0.0	0.47	0.0	0.20	0.0	0.05	0.0	0.10	1.02
12	0.01	0.0	0.04	0.0	0.21	0.0	0.30	0.0	0.01	0.0	0.0	0.0
13	0.03	0.14	0.01	0.0	0.12	0.56	0.03	0.0	0.0	0.0	0.13	0.08
14	0.09	0.04	0.01	0.0	0.37	0.0	0.0	0.0	0.0	0.14	0.23	0.05
15	0.0	0.02	0.03	0.0	0.0	1.15	0.0	0.0	0.0	0.0	0.25	0.05
16	0.0	0.0	0.04	0.02	0.0	0.36	0.0	0.04	0.04	0.02	0.0	0.0
17	0.0	0.0	0.14	0.07	0.10	0.0	0.0	0.71	0.55	0.07	0.0	0.0
18	0.15	0.0	0.16	0.67	0.10	0.0	0.0	0.21	0.0	0.10	0.0	0.01
19	0.01	0.04	0.32	0.68	0.59	0.08	0.0	0.38	0.0	0.0	0.37	0.15
20	0.0	0.0	0.02	0.0	1.40	0.30	0.0	0.0	0.0	1.15	1.10	0.15
21	0.0	0.0	0.21	0.0	0.03	0.0	0.47	0.0	0.0	0.13	0.08	0.03
22	0.0	0.0	0.08	0.0	0.0	0.0	0.99	0.0	0.0	0.69	0.0	1.30
23	0.0	0.0	0.0	0.36	0.0	0.31	0.0	0.0	0.0	0.0	0.07	0.0
24	0.40	0.41	0.0	0.19	0.0	0.21	0.0	0.11	0.08	0.0	0.22	0.0
25	0.03	1.16	0.66	0.0	0.18	0.07	0.0	0.21	0.23	0.0	0.0	0.0
26	0.0	0.10	0.14	0.0	0.01	0.01	0.91	0.0	0.09	0.0	0.07	1.17
27	0.0	0.0	0.09	0.04	0.0	0.59	0.09	0.0	0.0	0.20	0.0	1.07
28	0.0	0.0	0.0	0.30	0.15	0.15	0.59	0.0	0.0	0.0	0.0	0.10
29	0.12	0.15	0.10	0.01	0.0	0.0	0.78	0.0	0.14	0.0	0.04	0.0
30	0.35	0.03	0.0	0.0	0.0	0.01	0.32	0.0	0.0	0.0	0.10	0.0
31	0.40	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	3.09	3.71	2.69	3.68	4.62	4.77	5.01	4.09	3.88	3.19	7.32	6.18
STA AV	2.85	3.27	3.28	3.64	3.74	4.10	3.90	4.47	3.21	4.27	4.80	3.82

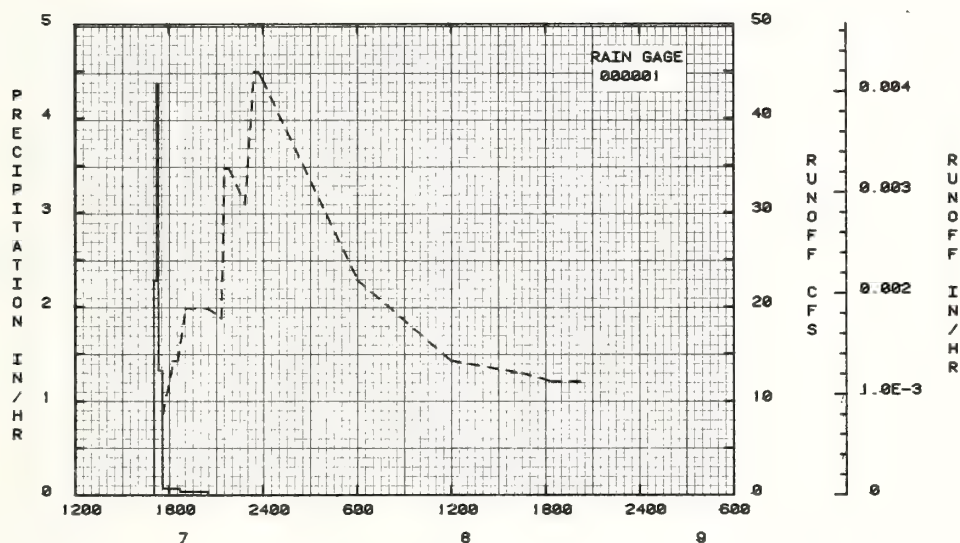
NOTES: Daily precipitation values from rain gage R-01. All precipitation is rain except for the months of January, February, and December during which all precipitation is snow or rain on snow. STA AV based on 11 yr (1959-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) NORTH DANVILLE, VERMONT WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	12.13	13.46	9.90	17.88	115.76	20.73	8.74	17.00	3.59	4.11	7.68	17.04
2	11.93	12.53	10.09	19.18	106.30	18.99	7.07	28.64	3.98	4.13	8.13	12.67
3	11.65	12.48	9.81	20.60	114.35	27.07	6.77	42.76	3.76	15.31	24.49	13.51
4	11.45	12.34	9.45	22.15	98.87	22.58	7.58	17.40	3.61	9.15	66.89	14.48
5	11.19	12.06	9.41	38.45	78.12	18.09	6.54	82.43	3.32	6.52	133.96	13.91
6	10.66	11.72	9.85	56.26	62.71	19.33	6.81	33.54	5.91	5.50	81.42	12.49
7	11.59	11.30	9.90	63.76	59.77	24.65	5.33	22.83	16.11	4.94	49.33	11.90
8	11.85	11.05	9.45	68.76	77.64	16.79	4.76	19.09	19.70	4.76	62.28	15.82
9	11.50	11.75	9.09	61.71	114.27	13.73	4.51	23.48	16.31	4.47	36.48	32.13
10	11.24	10.73	9.14	127.84	78.28	11.86	4.77	29.05	9.62	3.95	27.64	30.86
11	11.24	10.47	9.36	160.37	99.26	10.64	6.70	26.82	7.30	3.87	29.40	133.15
12	10.90	10.47	9.10	99.71	72.27	9.89	15.11	14.03	6.56	4.16	34.25	65.63
13	10.85	10.47	8.66	116.47	56.33	41.05	16.86	10.70	5.40	4.00	45.13	37.36
14	10.85	10.47	8.66	171.87	69.01	42.77	9.90	9.17	4.64	4.22	32.52	26.92
15	10.51	10.47	8.66	209.01	54.14	104.02	6.99	7.97	4.33	4.41	52.98	24.23
16	10.47	10.98	8.79	187.55	41.08	81.12	5.35	7.28	3.84	4.11	31.99	20.02
17	10.47	10.14	8.79	217.12	36.54	34.07	4.46	18.90	8.41	4.21	23.67	16.03
18	10.61	9.49	9.35	211.76	40.19	22.01	3.89	11.43	9.32	4.87	22.27	14.19
19	10.80	9.72	11.06	281.06	79.79	18.23	3.35	13.62	5.90	4.70	22.05	16.54
20	10.47	9.90	14.51	131.26	291.18	25.07	3.11	9.26	5.00	11.66	93.95	16.00
21	10.60	10.11	17.25	115.02	102.95	20.57	3.20	7.07	4.41	24.35	39.76	15.39
22	10.47	10.18	15.86	118.89	63.36	14.55	69.20	6.23	4.00	12.02	24.59	15.90
23	10.47	10.47	14.95	175.02	51.78	15.47	13.41	5.56	3.76	10.29	24.77	14.63
24	11.39	9.84	18.54	133.49	45.92	27.05	7.85	5.52	3.59	9.23	23.78	15.97
25	24.40	9.88	29.23	128.04	44.97	23.15	5.97	5.64	5.03	11.04	18.35	15.24
26	28.76	10.68	42.23	123.14	44.84	17.43	10.56	6.66	5.24	17.20	20.81	15.48
27	18.21	10.00	40.62	148.15	34.47	14.61	16.24	5.20	5.50	18.08	19.49	47.02
28	15.01	9.97	24.71	200.08	35.59	19.34	24.62	4.44	4.82	13.10	11.88	57.00
29	14.42	12.37	201.77	30.32	11.38	99.05	4.58	4.30	4.30	9.68	19.55	35.23
30	13.54	23.19	126.03	27.44	9.71	35.67	4.24	4.33	4.33	8.50	18.88	27.17
31	16.62	18.91	23.47	23.47	23.47	23.47	46.82	3.84	7.79	7.79	24.29	24.29
MEAN	12.78	10.83	14.87	125.08	72.61	25.20	15.20	16.27	6.39	8.20	36.94	26.72
INCHES	0.889	0.680	1.034	8.417	5.049	1.696	1.057	1.131	0.430	0.570	2.486	1.858
STA AV	0.869	0.787	1.630	6.288	2.674	0.988	0.548	0.479	0.425	1.274	1.639	1.390

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.002243. STA AV based on 10 yr (1960-69) record period.

1969 SELECTED RUNOFF EVENT			NORTH DANVILLE, VERMONT WATERSHED W-1								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF SEPTEMBER 7 - 8, 1969											
RG 000001			RG 000001								
9- 7	0.86	0.034	9- 7	1703	0.0	0.0	9- 7	1736	8.66	0.0	
				1713	2.2799	0.38		1817	14.25	0.0007	
				1720	4.3714	0.89		1835	14.25	0.0011	
				1735	1.3200	1.22		1905	19.86	0.0019	
				1841	0.0727	1.30		2027	19.86	0.0044	
WATERSHED CONDITIONS: Forest land, 64%; hay, 16%; pastured land, 15%; idle land with dense grass and brush growth, 3%; seeded to corn, 1%; and homesites, 1%.				2030	0.0385	1.37		2122	18.76	0.0060	
				9- 8	203	0.0	1.37		2134	34.70	0.0065
					501	0.0034	1.38		2151	34.70	0.0074
									2253	30.88	0.0106
									2328	44.98	0.0127
									2344	44.98	0.0138
									2400	44.06	0.0149
								9- 8	602	22.80	0.0337
									1200	14.25	0.0440
									1630	12.91	0.0497
							1826	12.06	0.0520		
							2027	12.06	0.0543		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000935. For 30-day antecedent rainfall and runoff, see tables of daily values.



NORTH DANVILLE, VERMONT WATERSHED W-2

LOCATION: Caledonia County, Vermont; 5 mi. NW of St. Johnsbury; unnamed tributary of Sleepers River, Connecticut River basin.

AREA: 146.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														NORTH DANVILLE, VERMONT WATERSHED W-2															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.44	2.81	1.44	3.23	4.17	4.41	4.57	3.81	2.42	2.24	5.40	5.30	42.24															
	Q	0.439	0.357	0.470	0.895	1.054	0.672	0.350	0.405	0.285	0.270	0.497	0.594	6.288															
STA AV	P	1.97	2.16	2.29	2.91	3.13	3.35	3.32	3.82	2.59	3.52	3.70	3.00	35.78															
	Q	0.700	0.638	1.693	3.157	1.787	0.901	0.517	0.397	0.321	0.634	0.982	1.071	12.798															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge Date		1 Hour Date		2 Hours Date		Maximum Volume for Selected Time Interval				6 Hours Date		12 Hours Date		1 Day Date		2 Days Date		8 Days Date									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		6-13	0.016	6-13	0.008	6-13	0.011	4-10	0.020	4- 9	0.032	4- 9	0.059	4- 8	0.101	4- 5	0.341												
MAXIMUMS FOR PERIOD OF RECORD																													
		3- 5	0.080	3- 5	0.080	3- 5	0.160	3- 5	0.390	3- 5	0.580	3- 6	0.830	3-30	1.140	3-28	2.540												
		1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1962	1962	1962	1962	1962												

NOTES: Watershed conditions: Pasture of mostly bluegrass, 38%; cultivated land entirely in clover and orchard grass hay, 37%; and forest stand, predominantly hardwoods, 25%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1956-59, USDA Misc. Pub. 945, p. 67.2-4. Precipitation records began Sept. 1958. Runoff records began October 1958. Part-year values not included in station average. For long-time precipitation records, see U.S. Weather Bureau records at St. Johnsbury, Vt.

1969 DAILY PRECIPITATION (inches)														NORTH DANVILLE, VERMONT WATERSHED W-2													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.16	0.09	0.0	0.20	0.0	0.0	0.02	0.08	0.0	0.0	0.0	0.0	0.0														
2	0.02	0.0	0.0	0.29	0.0	0.03	0.0	0.45	0.0	0.21	0.37	0.0	0.0														
3	0.0	0.44	0.0	0.0	0.0	0.28	0.36	0.0	0.0	0.39	0.06	0.12	0.0														
4	0.0	0.05	0.0	0.0	0.0	0.0	0.04	0.19	0.0	0.01	1.31	0.04	0.0														
5	0.0	0.02	0.0	0.18	0.0	0.0	0.0	0.65	0.0	0.0	0.95	0.04	0.0														
6	0.0	0.03	0.0	0.0	0.0	0.34	0.0	0.46	0.91	0.0	0.20	0.0	0.0														
7	0.68	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.44	0.0	0.06	0.0	0.0														
8	0.05	0.0	0.0	0.0	0.38	0.0	0.0	0.31	0.26	0.0	0.15	0.32	0.0														
9	0.02	0.22	0.0	0.0	0.28	0.0	0.0	0.06	0.01	0.0	0.05	0.13	0.0														
10	0.07	0.23	0.0	0.41	0.01	0.0	0.20	0.40	0.0	0.0	0.0	0.15	0.0														
11	0.01	0.0	0.05	0.0	0.46	0.0	0.17	0.0	0.0	0.0	0.30	0.59	0.0														
12	0.01	0.0	0.03	0.0	0.07	0.0	0.37	0.0	0.0	0.0	0.05	0.0	0.0														
13	0.03	0.0	0.02	0.0	0.22	1.06	0.01	0.0	0.0	0.0	0.15	0.05	0.0														
14	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.20	0.04	0.0														
15	0.0	0.0	0.0	0.02	0.0	0.0	1.27	0.0	0.0	0.0	0.19	0.02	0.0														
16	0.0	0.0	0.02	0.03	0.0	0.27	0.0	0.04	0.08	0.0	0.0	0.0	0.0														
17	0.0	0.0	0.12	0.01	0.07	0.0	0.0	0.46	0.47	0.10	0.0	0.0	0.0														
18	0.24	0.0	0.15	0.65	0.08	0.0	0.0	0.08	0.0	0.11	0.0	0.0	0.0														
19	0.0	0.0	0.34	0.64	0.55	0.02	0.0	0.18	0.0	0.01	0.21	0.13	0.0														
20	0.0	0.0	0.03	0.0	1.52	0.18	0.0	0.0	0.0	0.80	0.98	0.04	0.0														
21	0.0	0.0	0.16	0.0	0.0	0.0	0.18	0.0	0.0	0.11	0.01	0.0	0.0														
22	0.0	0.0	0.0	0.01	0.0	0.0	0.77	0.0	0.0	0.37	0.0	1.10	0.0														
23	0.0	0.0	0.0	0.20	0.0	0.30	0.0	0.0	0.0	0.0	0.05	0.01	0.0														
24	0.25	0.34	0.0	0.16	0.0	0.16	0.0	0.10	0.01	0.0	0.11	0.0	0.0														
25	0.0	1.39	0.51	0.02	0.20	0.02	0.0	0.35	0.15	0.0	0.0	0.0	0.0														
26	0.0	0.0	0.01	0.0	0.0	0.0	0.51	0.0	0.07	0.0	0.0	0.0	0.74														
27	0.0	0.0	0.0	0.05	0.03	0.25	0.09	0.0	0.0	0.13	0.0	1.07	0.0														
28	0.04	0.0	0.0	0.28	0.06	0.19	0.66	0.0	0.0	0.0	0.0	0.71	0.0														
29	0.13	0.0	0.08	0.0	0.0	0.0	0.93	0.0	0.02	0.0	0.0	0.0	0.0														
30	0.23	0.0	0.0	0.0	0.02	0.04	0.26	0.0	0.0	0.0	0.0	0.0	0.0														
31	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0														
TOTAL	2.44	2.81	1.44	3.23	4.17	4.41	4.57	3.81	2.42	2.24	5.40	5.30															
STA AV	1.97	2.16	2.29	2.91	3.13	3.35	3.32	3.82	2.59	3.52	3.70	3.00															

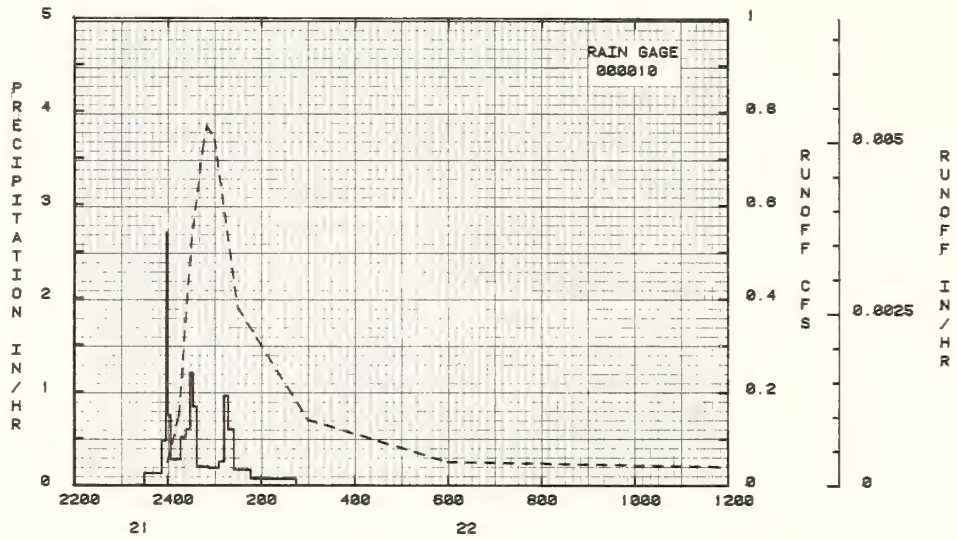
NOTES: For temperature data see table of daily maximum and minimum values included with information for Watershed 67-001. Daily precipitation values from rain gage R-10. All precipitation is rain except for the months of December, January, and February, during which all precipitation is snow or rain on snow. STA AV based on 11 yr record period (1959-1969).

1969 MEAN DAILY DISCHARGE (cfs) NORTH DANVILLE, VERMONT WATERSHED W-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.079	0.092	0.075	0.103	0.081	0.106	0.084	0.078	0.052	0.043	0.047	0.101
2	0.079	0.088	0.075	0.116	0.211	0.144	0.078	0.091	0.057	0.052	0.060	0.103
3	0.079	0.088	0.075	0.104	0.252	0.190	0.089	0.116	0.053	0.109	0.088	0.099
4	0.079	0.087	0.075	0.141	0.231	0.143	0.085	0.091	0.050	0.056	0.097	0.102
5	0.079	0.080	0.075	0.187	0.215	0.135	0.082	0.127	0.048	0.050	0.143	0.099
6	0.079	0.079	0.075	0.262	0.205	0.166	0.071	0.103	0.059	0.048	0.161	0.099
7	0.079	0.079	0.074	0.221	0.217	0.144	0.043	0.081	0.078	0.047	0.119	0.099
8	0.079	0.079	0.071	0.265	0.239	0.128	0.023	0.111	0.098	0.048	0.144	0.117
9	0.079	0.079	0.071	0.258	0.253	0.116	0.023	0.096	0.095	0.043	0.102	0.164
10	0.079	0.079	0.070	0.281	0.216	0.110	0.025	0.142	0.067	0.041	0.097	0.133
11	0.079	0.079	0.066	0.258	0.263	0.106	0.055	0.095	0.062	0.041	0.063	0.161
12	0.079	0.079	0.066	0.273	0.223	0.103	0.113	0.074	0.058	0.041	0.032	0.162
13	0.079	0.079	0.066	0.299	0.230	0.197	0.084	0.068	0.052	0.041	0.066	0.136
14	0.079	0.076	0.066	0.208	0.227	0.152	0.067	0.067	0.051	0.046	0.122	0.122
15	0.079	0.075	0.066	0.209	0.200	0.207	0.064	0.054	0.051	0.041	0.134	0.125
16	0.079	0.075	0.066	0.193	0.187	0.207	0.058	0.050	0.050	0.041	0.101	0.119
17	0.079	0.074	0.070	0.205	0.180	0.140	0.053	0.135	0.099	0.042	0.097	0.113
18	0.079	0.071	0.076	0.238	0.202	0.129	0.035	0.087	0.062	0.046	0.099	0.115
19	0.079	0.071	0.092	0.263	0.240	0.122	0.017	0.096	0.053	0.041	0.101	0.118
20	0.079	0.074	0.109	0.167	0.270	0.162	0.018	0.069	0.051	0.097	0.163	0.069
21	0.079	0.076	0.112	0.155	0.238	0.119	0.017	0.061	0.050	0.040	0.110	0.037
22	0.079	0.076	0.101	0.143	0.210	0.108	0.114	0.060	0.049	0.063	0.101	0.039
23	0.079	0.075	0.100	0.155	0.205	0.140	0.066	0.050	0.047	0.056	0.101	0.056
24	0.105	0.075	0.117	0.139	0.202	0.149	0.058	0.043	0.046	0.056	0.105	0.092
25	0.147	0.078	0.189	0.118	0.217	0.127	0.052	0.078	0.061	0.068	0.098	0.119
26	0.101	0.075	0.164	0.109	0.187	0.112	0.084	0.075	0.054	0.065	0.097	0.126
27	0.089	0.075	0.135	0.108	0.182	0.106	0.064	0.064	0.053	0.063	0.099	0.236
28	0.082	0.075	0.121	0.110	0.192	0.133	0.153	0.054	0.049	0.053	0.099	0.158
29	0.079		0.133	0.114	0.173	0.093	0.158	0.052	0.044	0.047	0.099	0.144
30	0.117		0.122	0.090	0.169	0.092	0.106	0.063	0.045	0.047	0.099	0.142
31	0.159		0.110		0.151		0.106	0.052		0.047		0.137
MEAN	0.0870	0.0782	0.0930	0.1830	0.2086	0.1375	0.0692	0.0801	0.0582	0.0535	0.1015	0.1176
INCHES	0.439	0.357	0.470	0.895	1.054	0.672	0.350	0.405	0.285	0.270	0.497	0.594
STA AV	0.700	0.638	1.693	3.157	1.787	0.901	0.517	0.397	0.321	0.634	0.982	1.071

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.1630248. STA AV based on 11 yr record period (1959-1969).

1969 SELECTED RUNOFF EVENT			NORTH DANVILLE, VERMONT WATERSHED W-2							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 21 - 22, 1969										
RG 000010			RG 000010							
7-21	0.0	0.003	7-21	2330	0.0	0.0	7-21	2400	0.05	0.0
				2353	0.1304	0.05	7-22	15	0.15	0.0002
				2358	0.4799	0.09		30	0.51	0.0008
				2400	2.6998	0.18		45	0.72	0.0018
			7-22	4	0.7498	0.23		50	0.77	0.0022
WATERSHED CONDITIONS:				17	0.2770	0.29		100	0.75	0.0031
38% pastured land; 37% hay;				24	0.5143	0.35		130	0.38	0.0050
and 25% forest.				29	0.6000	0.40		300	0.14	0.0077
				33	1.1998	0.48		600	0.06	0.0098
				38	0.8401	0.55		1200	0.04	0.0118
				53	0.2000	0.60		1245	0.11	0.0122
				106	0.1846	0.64				
				113	0.2571	0.67				
				118	0.9600	0.75				
				125	0.6001	0.82				
				147	0.1636	0.88				
				212	0.0720	0.91				
				245	0.0727	0.95				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.006793. For 30-day antecedent rainfall and runoff, see tables of daily amounts.



EVENT OF JULY 21 - 22, 1969
NORTH DANVILLE, VERMONT WATERSHED W-2

NORTH DANVILLE, VERMONT WATERSHED W-3

LOCATION: Caledonia County, Vermont; 7.5 mi. NW of St. Johnsbury; Pope Brook, Sleepers River, Connecticut River Basin.

AREA: 2067.00 acres 3.23 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)															NORTH DANVILLE, VERMONT WATERSHED W-3														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	3.09	3.71	2.69	3.68	4.62	4.77	5.01	4.09	3.88	3.19	7.32	6.18	52.23															
	Q	1.202	0.954	1.167	8.764	6.756	2.034	1.601	1.595	0.775	0.857	2.502	2.140	30.347															
STA AV	P	2.85	3.27	3.28	3.64	3.74	4.10	3.90	4.47	3.21	4.27	4.80	3.82	45.36															
	Q	1.007	0.864	1.576	6.747	3.825	1.555	0.939	0.831	0.708	1.217	1.589	1.399	22.257															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days													
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		5-20	0.076	5-20	0.068	5-20	0.123	5-20	0.288	5-20	0.475	5-20	0.702	4-17	1.158	4-14	3.552												
MAXIMUMS FOR PERIOD OF RECORD																													
		5-20	0.076	4-21	0.070	4-21	0.130	4-14	0.320	4-14	0.590	4-15	1.080	4-16	1.860	4-20	4.440												
		1969		1963		1963		1964		1964		1964		1964		1964													

NOTES: Watershed conditions: Forest, predominantly hardwoods, 67%; pasture of mostly bluegrass, 19%; cultivated land consisting of clover, orchard grass, and timothy hay with very small area in row crops, 11%; and idle land in tall grasses and woody plants, 3%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1960-61, USDA Misc. Pub. 994, p. 67.3-5. Precipitation records began January 1, 1959. Runoff records began January 1, 1960. For long-time precipitation records, see U. S. Weather Bureau records at St. Johnsbury, Vt.

1969 DAILY PRECIPITATION (inches)														NORTH DANVILLE, VERMONT WATERSHED W-3													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.35	0.08	0.0	0.21	0.0	0.0	0.04	0.09	0.10	0.0	0.0	0.05	0.05														
2	0.06	0.0	0.0	0.34	0.0	0.0	0.0	0.11	0.01	0.23	0.47	0.0															
3	0.01	0.54	0.13	0.0	0.0	0.53	0.0	0.01	0.0	0.37	0.27	0.09															
4	0.02	0.24	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	1.61	0.08															
5	0.0	0.05	0.0	0.23	0.0	0.03	0.14	0.80	0.0	0.0	1.24	0.08															
6	0.0	0.05	0.0	0.0	0.0	0.41	0.0	0.49	0.84	0.0	0.36	0.0															
7	0.70	0.0	0.0	0.0	0.10	0.0	0.0	0.0	1.39	0.0	0.26	0.0															
8	0.15	0.0	0.14	0.0	0.30	0.0	0.0	0.20	0.30	0.09	0.28	0.18															
9	0.04	0.39	0.02	0.0	0.45	0.0	0.0	0.04	0.02	0.0	0.05	0.35															
10	0.11	0.45	0.09	0.47	0.03	0.0	0.15	0.50	0.03	0.0	0.02	0.17															
11	0.06	0.0	0.08	0.0	0.47	0.0	0.20	0.0	0.05	0.0	0.10	1.02															
12	0.01	0.0	0.04	0.0	0.21	0.0	0.30	0.0	0.01	0.0	0.0	0.0															
13	0.03	0.14	0.01	0.0	0.12	0.56	0.03	0.0	0.0	0.0	0.13	0.08															
14	0.09	0.04	0.01	0.0	0.37	0.0	0.0	0.0	0.0	0.14	0.23	0.05															
15	0.0	0.02	0.03	0.0	0.0	1.15	0.0	0.0	0.0	0.0	0.25	0.05															
16	0.0	0.0	0.04	0.02	0.0	0.36	0.0	0.04	0.04	0.02	0.0	0.0															
17	0.0	0.0	0.14	0.07	0.10	0.0	0.0	0.71	0.55	0.07	0.0	0.0															
18	0.15	0.0	0.16	0.67	0.10	0.0	0.0	0.21	0.0	0.10	0.0	0.01															
19	0.01	0.04	0.32	0.68	0.59	0.08	0.0	0.38	0.0	0.0	0.37	0.15															
20	0.0	0.0	0.02	0.0	1.40	0.30	0.0	0.0	0.0	1.15	1.10	0.15															
21	0.0	0.0	0.21	0.0	0.03	0.0	0.47	0.0	0.0	0.13	0.08	0.03															
22	0.0	0.0	0.08	0.0	0.0	0.0	0.99	0.0	0.0	0.69	0.0	1.30															
23	0.0	0.0	0.0	0.36	0.0	0.31	0.0	0.0	0.0	0.0	0.07	0.0															
24	0.40	0.41	0.0	0.19	0.0	0.21	0.0	0.11	0.08	0.0	0.22	0.0															
25	0.03	1.16	0.66	0.0	0.18	0.07	0.0	0.21	0.23	0.0	0.0	0.0															
26	0.0	0.10	0.14	0.0	0.01	0.01	0.91	0.0	0.09	0.0	0.07	1.17															
27	0.0	0.0	0.09	0.04	0.0	0.59	0.09	0.0	0.0	0.20	0.0	1.07															
28	0.0	0.0	0.0	0.30	0.15	0.15	0.59	0.0	0.0	0.0	0.0	0.10															
29	0.12	0.0	0.15	0.10	0.01	0.0	0.78	0.0	0.14	0.0	0.04	0.0															
30	0.35	0.03	0.0	0.0	0.0	0.01	0.32	0.0	0.0	0.0	0.10	0.0															
31	0.40	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
TOTAL	3.09	3.71	2.69	3.68	4.62	4.77	5.01	4.09	3.88	3.19	7.32	6.18															
STA AV	2.85	3.27	3.28	3.64	3.74	4.10	3.90	4.47	3.21	4.27	4.80	3.82															

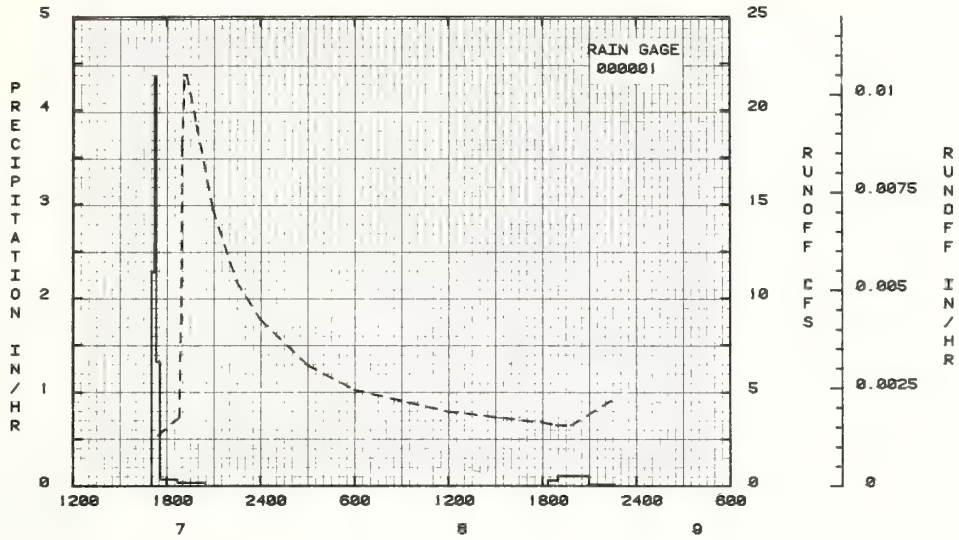
NOTES: For temperature data see table of daily maximum and minimum values included with information for Watershed 67.001. Daily precipitation values from rain gage R-01. All precipitation is rain except for the months of December, January, and February, during which all precipitation is snow or rain on snow. STA AV based on 11 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) NORTH DANVILLE, VERMONT WATERSHED W-3												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.419	3.344	2.798	3.219	30.489	5.716	3.168	2.703	1.615	1.637	2.235	4.859
2	3.361	3.223	2.813	3.951	28.781	5.460	2.806	4.231	1.684	1.592	2.511	4.066
3	3.326	3.237	2.766	3.831	29.501	7.948	3.026	3.975	1.656	3.869	5.462	6.336
4	3.275	3.309	2.704	4.429	25.869	5.977	3.046	2.449	1.605	2.163	13.477	4.717
5	3.206	3.173	2.658	6.724	21.715	5.056	3.093	22.487	1.546	1.697	17.067	4.100
6	3.165	3.039	2.567	8.677	18.498	5.955	3.019	9.244	2.964	1.557	11.788	4.004
7	3.344	2.957	2.537	9.793	17.173	6.044	2.555	8.056	5.840	1.673	8.108	4.190
8	3.223	3.140	2.752	10.073	19.671	4.815	2.417	6.614	4.740	1.648	9.599	4.125
9	3.056	3.089	2.783	10.594	26.822	4.879	2.243	6.528	4.356	1.626	6.598	7.110
10	3.089	2.910	2.582	20.603	19.609	4.702	2.455	8.746	2.866	1.557	5.807	5.563
11	3.073	2.909	2.582	22.662	23.228	4.276	3.120	7.399	2.420	1.445	6.567	20.420
12	2.957	2.957	2.582	16.745	17.916	3.930	4.161	4.454	2.251	1.445	6.784	10.480
13	3.039	2.957	2.582	20.652	17.033	6.791	3.912	3.843	1.968	1.445	8.998	7.473
14	3.089	2.957	2.582	31.104	18.688	5.987	2.816	3.363	1.829	1.687	6.730	6.282
15	3.089	3.039	2.582	39.847	15.214	16.512	2.513	2.798	1.781	1.660	9.464	5.830
16	3.039	2.925	2.478	37.253	12.679	11.991	2.241	2.813	1.762	1.625	6.423	5.306
17	2.957	2.782	2.478	44.587	11.386	6.587	2.088	5.100	2.974	1.660	5.711	4.882
18	2.925	2.704	2.643	45.474	11.829	5.079	2.006	3.322	2.448	1.951	5.549	4.502
19	2.957	2.704	2.990	52.004	18.386	4.510	1.858	4.262	1.968	1.720	5.898	5.054
20	2.941	2.643	2.388	29.466	17.572	5.576	1.817	2.940	1.829	4.932	16.096	5.052
21	2.957	2.725	3.344	27.954	27.384	4.615	1.917	2.412	1.707	5.382	7.703	5.096
22	2.909	2.824	3.190	27.021	18.546	3.930	9.982	2.202	1.625	3.106	6.219	4.774
23	2.909	2.877	3.286	37.496	15.401	4.604	2.861	2.141	1.672	2.752	5.853	4.752
24	3.464	2.845	3.948	29.655	14.079	6.495	2.265	2.253	1.625	2.568	6.094	5.554
25	7.068	3.023	5.980	30.578	13.553	5.671	2.049	2.429	1.973	3.146	5.545	5.274
26	4.425	2.894	6.548	28.672	12.921	4.675	4.600	2.445	1.755	4.257	5.274	4.635
27	4.110	2.798	5.004	34.061	10.887	5.225	5.136	2.035	1.804	4.201	4.838	9.803
28	3.729	2.829	4.275	46.493	9.885	6.130	8.126	1.866	1.707	3.209	5.045	6.520
29	3.449		4.243	44.885	8.040	3.972	25.139	1.866	1.684	2.568	4.966	5.389
30	3.310		4.197	32.601	7.515	3.517	10.275	1.844	1.660	2.362	4.901	4.966
31	3.521		3.551	6.470			12.358	1.696		2.249		4.730
MEAN	3.367	2.958	3.268	25.370	18.927	5.887	4.486	4.468	2.244	2.400	7.243	5.995
INCHES	1.202	0.954	1.167	8.764	6.756	2.034	1.601	1.595	0.775	0.857	2.502	2.140
STA AV	1.007	0.864	1.576	6.747	3.825	1.555	0.939	0.831	0.708	1.217	1.589	1.399

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.011515. STA AV based on 10 yr record period.

1969 SELECTED RUNOFF EVENT NORTH DANVILLE, VERMONT WATERSHED W-3											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF SEPTEMBER 7 - 8, 1969											
RG 000001			RG 000001								
9- 7	0.86	0.064	9- 7	1703	0.0	0.0	9- 7	1726	2.70	0.0	
				1713	2.2799	0.38		1849	3.65	0.0021	
				1720	4.3714	0.89		1856	9.57	0.0025	
				1735	1.3200	1.22		1900	18.10	0.0030	
				1841	0.0727	1.30		1909	21.90	0.0044	
WATERSHED CONDITIONS:											
67% forest land; 19% pastured											
land; 11% hay and 3% idle											
land with dense grass and											
brush growth.											
			9- 8	2030	0.0385	1.37		1917	21.90	0.0058	
				203	0.0	1.37		1956	19.20	0.0122	
				501	0.0034	1.38		2058	14.71	0.0206	
				1822	0.0	1.38		2229	10.88	0.0299	
				1900	0.0632	1.42		2400	8.84	0.0371	
				1959	0.1119	1.53	9- 8	302	6.41	0.0482	
				2059	0.1100	1.64		601	5.10	0.0564	
				2238	0.0182	1.67		1200	3.95	0.0694	
								1800	3.36	0.0799	
								1856	3.22	0.0814	
								1951	3.22	0.0828	
								2229	4.58	0.0877	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0004798. For 30-day antecedent rainfall and runoff, see tables of daily amounts.



EVENT OF SEPTEMBER 7 - 8, 1969
NORTH DANVILLE, VERMONT WATERSHED W-3

NORTH DANVILLE, VERMONT WATERSHED W-4

LOCATION: Caledonia County, Vermont; 4.7 mi. NW of St. Johnsbury; Morrill Brook, Sleepers River, Connecticut River Basin.

AREA: 10752.00 acres 16.80 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														NORTH DANVILLE, VERMONT WATERSHED W-4																			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																			
1969	P	2.44	2.81	1.44	3.23	4.17	4.41	4.57	3.81	2.42	2.24	5.40	5.30	42.24																			
	Q	0.897	0.732	1.147	10.396	6.826	2.101	1.176	1.115	0.662	0.693	2.799	2.086	30.630																			
STA AV	P	1.97	2.16	2.29	2.91	3.13	3.35	3.32	3.82	2.59	3.52	3.70	3.00	35.78																			
	Q	0.859	0.733	1.681	5.797	3.590	1.419	0.747	0.611	0.519	1.042	1.489	1.250	19.736																			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		Date		Date		Date															
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.														
1969		5-20	0.061	5-20	0.061	5-20	0.118	5-20	0.310	4-19	0.522	4-18	0.900	4-17	1.485	4-14	4.323																
MAXIMUMS FOR PERIOD OF RECORD																																	
		5-20	0.061	5-20	0.061	5-20	0.118	5-20	0.310	4-19	0.522	4-18	0.900	4-17	1.485	4-14	4.323																
1969		1969		1969		1969		1969		1969		1969		1969		1969																	

NOTES: Forest, 74%; cultivated, 12%; pasture, 12%; and idle, 2%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Hds. Pub. 1262, p. 67.4-19. Precipitation records began 1959. Runoff records began January 1, 1960. For long-time precipitation records, see U.S. Weather Bureau records at St. Johnsbury, Vt.

1969 DAILY PRECIPITATION (inches)													NORTH DANVILLE, VERMONT WATERSHED W-4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</

NOTES: For temperature data see table of daily maximum and minimum values included with information for Watershed 67.001. Daily precipitation values from rain gage R-10. All precipitation is rain except for the months of December, January, and February, during which all precipitation is snow or rain on snow. STA AV based on 11 yr period.

1969 MEAN DAILY DISCHARGE (cfs) NORTH DANVILLE, VERMONT WATERSHED W-4												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	12.69	15.72	11.41	19.88	160.69	32.46	13.65	17.29	4.98	5.31	9.43	23.83
2	12.69	13.79	11.15	21.86	151.05	30.57	11.10	23.04	4.79	5.13	9.71	17.78
3	12.42	13.69	11.31	21.99	156.35	42.44	11.94	25.66	4.53	18.20	25.50	21.39
4	12.33	13.83	11.31	24.60	142.33	38.61	19.27	14.51	4.62	11.38	84.36	21.53
5	12.33	12.87	11.03	40.92	119.72	28.32	12.44	67.15	3.99	8.17	138.08	19.88
6	12.03	12.42	10.98	58.85	102.13	30.23	11.28	34.28	12.02	7.09	86.49	18.15
7	12.16	12.07	10.82	66.59	95.09	36.25	9.09	28.06	35.22	6.41	47.08	17.60
8	12.34	11.95	10.74	73.40	109.21	25.51	7.98	21.31	36.05	5.98	48.40	21.02
9	11.82	12.60	10.46	69.08	157.82	22.28	7.00	20.53	26.45	5.82	35.52	36.01
10	11.77	11.85	10.31	127.76	116.54	19.59	6.90	29.87	15.11	5.28	30.69	33.17
11	11.52	11.40	10.42	157.90	130.26	17.44	10.19	24.71	11.07	5.03	35.06	133.52
12	11.56	11.31	10.35	191.22	101.75	15.90	21.37	14.78	9.70	5.23	38.36	69.41
13	11.55	11.23	10.35	138.08	87.65	32.13	20.41	11.93	8.10	5.03	45.63	42.46
14	11.31	10.98	10.35	196.43	91.22	39.15	11.82	10.31	6.91	5.31	37.30	32.93
15	11.31	10.98	10.35	249.09	75.96	101.66	8.83	9.04	6.49	5.03	52.29	31.75
16	11.08	11.40	10.35	226.36	62.98	80.31	7.51	8.50	5.95	4.81	35.90	26.03
17	11.31	10.82	10.35	267.45	58.54	38.89	6.29	21.54	12.52	4.84	29.14	21.24
18	11.44	10.42	10.83	277.38	59.48	27.88	5.49	14.06	13.34	5.94	28.14	20.96
19	11.90	10.66	12.70	383.89	93.45	24.49	4.62	16.02	8.49	6.01	28.60	23.99
20	11.40	10.74	17.86	185.61	319.00	30.29	4.30	12.06	7.04	15.36	114.85	23.38
21	11.31	11.11	20.35	164.74	117.05	25.68	4.32	8.76	6.40	34.78	48.74	21.01
22	11.40	11.31	18.44	165.67	81.42	19.82	49.86	7.50	6.02	16.04	33.72	22.65
23	11.31	11.31	16.48	216.80	72.41	22.57	13.32	6.73	5.60	13.09	33.65	21.07
24	11.98	11.14	20.86	178.32	65.43	34.78	8.34	6.65	5.41	11.11	32.57	22.46
25	16.99	10.16	31.49	164.80	64.41	29.08	6.47	5.30	6.88	12.97	25.53	21.79
26	27.99	12.12	47.75	165.84	64.73	23.00	11.47	11.33	7.03	17.18	28.74	20.95
27	17.59	11.44	40.70	181.09	51.82	21.97	21.50	7.88	7.28	19.11	26.57	34.56
28	14.43	11.31	26.93	226.82	53.12	29.27	26.69	6.67	6.29	15.99	20.11	44.34
29	13.64		25.22	262.80	44.47	17.62	106.63	6.46	5.52	11.74	28.01	29.23
30	13.52		25.58	171.18	40.80	14.80	37.01	6.24	5.41	10.31	26.29	24.69
31	17.86		21.10		36.59		34.18	5.44		9.42		23.49
MEAN	13.06	11.81	16.72	156.55	99.46	31.63	17.14	16.25	9.97	10.10	42.15	30.39
INCHES	0.897	0.732	1.147	10.396	6.826	2.101	1.176	1.115	0.662	0.693	2.799	2.086
STA AV	0.859	0.733	1.681	5.797	3.590	1.419	0.747	0.611	0.519	1.042	1.489	1.250

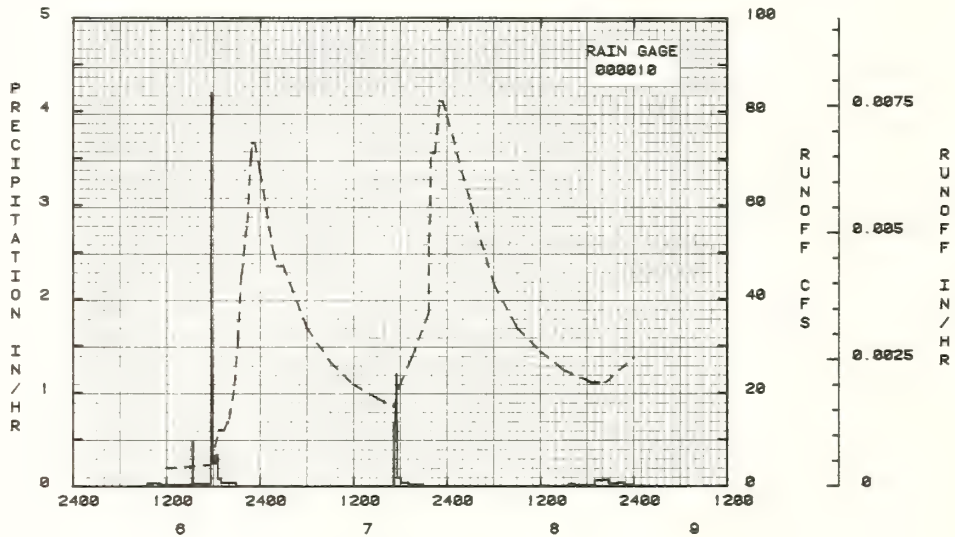
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.002213695. STA AV based on 10 yr period.

1969 SELECTED RUNOFF EVENT NORTH DANVILLE, VERMONT WATERSHED W-4												
ANTECEDENT CONDITIONS			RAINFALL									
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Runoff	Date	Time	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	Mo-Day	of Day	(inches)
EVENT OF SEPTEMBER 5 - 8, 1969												
EG 000010												
9- 6	0.0	0.004	9- 6	932	0.0	0.0	9- 6	1200	3.90	0.0		
				1113	0.0297	0.05		1742	4.62	0.0022		
				1519	0.0146	0.11		1816	8.57	0.0025		
				1524	0.4799	0.15		1845	11.99	0.0030		
				1741	0.0263	0.21		1921	11.99	0.0037		
WATERSHED CONDITIONS:												
74% forest land; 12% pastured												
land; 12% cultivated; 2% idle												
land with dense grass and												
brush growth.												
				1743	2.4006	0.29		2005	14.55	0.0046		
				1744	4.2015	0.36		2043	21.63	0.0057		
				1745	4.1967	0.43		2110	31.18	0.0068		
				1749	1.2000	0.51		2138	45.37	0.0085		
				1753	1.0501	0.58		2222	56.46	0.0119		
				1804	0.3273	0.64		2247	70.14	0.0143		
				1821	0.2470	0.71		2300	73.32	0.0157		
				1837	0.3375	0.80		2319	73.32	0.0178		
				1901	0.0750	0.83		2400	67.05	0.0222		
				2056	0.0365	0.90		9- 7	140	50.30	0.0312	
			9- 7	2400	0.0033	0.91		214	46.98	0.0337		
				1712	0.0	0.91		259	46.98	0.0370		
				1720	0.6751	1.00		600	33.76	0.0482		
				1726	0.8001	1.08		900	26.41	0.0565		
				1730	1.1995	1.16		1200	21.63	0.0631		
				1736	0.7001	1.23		1500	18.77	0.0687		
				1803	0.0889	1.27		1714	17.00	0.0724		
				1906	0.0381	1.31		1758	21.63	0.0737		
				2051	0.0171	1.34		1929	27.56	0.0771		
				2400	0.0032	1.35		2139	37.16	0.0836		
			9- 8	1536	0.0	1.35		2140	52.01	0.0837		
				1622	0.0261	1.37		2156	71.19	0.0852		
				1859	0.0115	1.40		2227	71.19	0.0886		
				1955	0.0643	1.46		2301	82.24	0.0926		
				2045	0.0720	1.52		2323	82.24	0.0954		
				2200	0.0320	1.56		2401	78.82	0.1001		
				2243	0.0419	1.59		301	60.18	0.1193		
				2400	0.0156	1.61		559	43.03	0.1334		
								859	33.76	0.1440		
								1201	28.73	0.1527		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000092. For 30-day antecedent rainfall and runoff see tables of daily amounts.

1969 SELECTED RUNOFF EVENT			NORTH DANVILLE, VERMONT WATERSHED W-4								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF SEPTEMBER 5 - 8, 1969 (CONTINUED)											
							9- 8	1500	24.75	0.1601	
								1800	22.64	0.1667	
								1824	22.13	0.1675	
								2021	22.13	0.1715	
								2400	27.56	0.1799	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000092. For 30-day antecedent rainfall and runoff see tables of daily amounts.



EVENT OF SEPTEMBER 5 - 8, 1969
NORTH DANVILLE, VERMONT WATERSHED W-4

NORTH DANVILLE, VERMONT WATERSHED W-5

LOCATION: Caledonia County, Vermont; 2 mi. NW of St. Johnsbury; Sleepers River, Connecticut River Basin.

AREA: 27469.00 acres 42.92 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										NORTH DANVILLE, VERMONT WATERSHED W-5									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	2.44	2.81	1.44	3.23	4.17	4.41	4.57	3.81	2.42	2.24	5.40	5.30	42.24					
	Q	0.885	0.729	1.330	9.284	5.461	1.714	1.077	1.162	0.524	0.606	2.506	1.878	27.117					
STA AV	P	1.97	2.16	2.29	2.91	3.13	3.35	3.32	3.82	2.59	3.52	3.70	3.00	35.78					
	Q	1.364	1.141	2.469	5.965	2.948	1.108	0.610	0.510	0.447	0.992	1.500	1.392	20.448					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5-20	0.080	5-20	0.077	5-20	0.146	5-20	0.351	5-20	0.574	4-18	0.861	4-17	1.368	4-13	3.928		
MAXIMUMS FOR PERIOD OF RECORD																			
		5-20	0.080	5-20	0.077	5-20	0.146	5-20	0.351	5-20	0.574	4-18	0.861	4-17	1.368	4-13	3.928		
		1969		1969		1969		1969		1969		1969		1969		1969			

NOTES: Watershed conditions: Forest predominantly hardwoods, 67%; cultivated land consisting of mostly clover, orchard grass, and timothy hay with very little in row crops, 17%; pasture of mostly bluegrass, 13%; idle land in tall grasses and woody plants, 2%; and homesites and roads, 1%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1960-61, USDA Misc. Pub. 994, p. 67.5-5. Precipitation records began January 1, 1959. Runoff records began January 1, 1960. For long-time precipitation records, see U.S. Weather Bureau records at St. Johnsbury, Vt.

1969 DAILY PRECIPITATION (inches)														NORTH DANVILLE, VERMONT WATERSHED W-5											
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
	1	0.16	0.09	0.0	0.20	0.0	0.0	0.02	0.08	0.0	0.0	0.0	0.0												
	2	0.02	0.0	0.0	0.29	0.0	0.03	0.0	0.45	0.0	0.21	0.37	0.0												
	3	0.0	0.44	0.0	0.0	0.0	0.28	0.36	0.0	0.0	0.39	0.06	0.12												
	4	0.0	0.05	0.0	0.0	0.0	0.0	0.04	0.19	0.0	0.01	1.31	0.04												
	5	0.0	0.02	0.0	0.18	0.0	0.0	0.0	0.65	0.0	0.0	0.95	0.04												
	6	0.0	0.03	0.0	0.0	0.0	0.34	0.0	0.46	0.91	0.0	0.20	0.0												
	7	0.68	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.44	0.0	0.06	0.0												
	8	0.05	0.0	0.0	0.0	0.38	0.0	0.0	0.31	0.26	0.0	0.15	0.32												
	9	0.02	0.22	0.0	0.0	0.28	0.0	0.0	0.06	0.01	0.0	0.05	0.13												
	10	0.07	0.23	0.0	0.41	0.01	0.0	0.20	0.40	0.0	0.0	0.0	0.15												
	11	0.01	0.0	0.05	0.0	0.46	0.0	0.17	0.0	0.0	0.0	0.30	0.59												
	12	0.01	0.0	0.03	0.0	0.07	0.0	0.37	0.0	0.0	0.0	0.05	0.0												
	13	0.03	0.0	0.02	0.0	0.22	1.06	0.01	0.0	0.0	0.0	0.15	0.05												
	14	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.20	0.04												
	15	0.0	0.0	0.0	0.02	0.0	1.27	0.0	0.0	0.0	0.0	0.19	0.02												
	16	0.0	0.0	0.02	0.03	0.0	0.27	0.0	0.04	0.08	0.0	0.0	0.0												
	17	0.0	0.0	0.12	0.01	0.07	0.0	0.0	0.46	0.47	0.10	0.0	0.0												
	18	0.24	0.0	0.15	0.65	0.08	0.0	0.0	0.08	0.0	0.11	0.0	0.0												
	19	0.0	0.0	0.34	0.64	0.55	0.02	0.0	0.18	0.0	0.01	0.21	0.13												
	20	0.0	0.0	0.03	0.0	1.52	0.18	0.0	0.0	0.0	0.80	0.98	0.04												
	21	0.0	0.0	0.16	0.0	0.0	0.0	0.18	0.0	0.0	0.11	0.01	0.0												
	22	0.0	0.0	0.0	0.01	0.0	0.0	0.77	0.0	0.0	0.37	0.0	1.10												
	23	0.0	0.0	0.0	0.20	0.0	0.30	0.0	0.0	0.0	0.0	0.05	0.01												
	24	0.25	0.34	0.0	0.16	0.0	0.16	0.0	0.10	0.01	0.0	0.11	0.0												
	25	0.0	1.39	0.51	0.02	0.20	0.02	0.0	0.35	0.15	0.0	0.0	0.0												
	26	0.0	0.0	0.01	0.0	0.0	0.0	0.51	0.0	0.07	0.0	0.0	0.74												
	27	0.0	0.0	0.0	0.05	0.03	0.25	0.09	0.0	0.0	0.13	0.0	1.07												
	28	0.04	0.0	0.0	0.28	0.06	0.19	0.66	0.0	0.0	0.0	0.0	0.71												
	29	0.13	0.0	0.08	0.0	0.0	0.0	0.93	0.0	0.02	0.0	0.0	0.0												
	30	0.23	0.0	0.0	0.0	0.02	0.04	0.26	0.0	0.0	0.0	0.0	0.0												
	31	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
TOTAL		2.44	2.81	1.44	3.23	4.17	4.41	4.57	3.81	2.42	2.24	5.40	5.30												
STA AV		1.97	2.16	2.29	2.91	3.13	3.35	3.32	3.82	2.59	3.52	3.70	3.00												

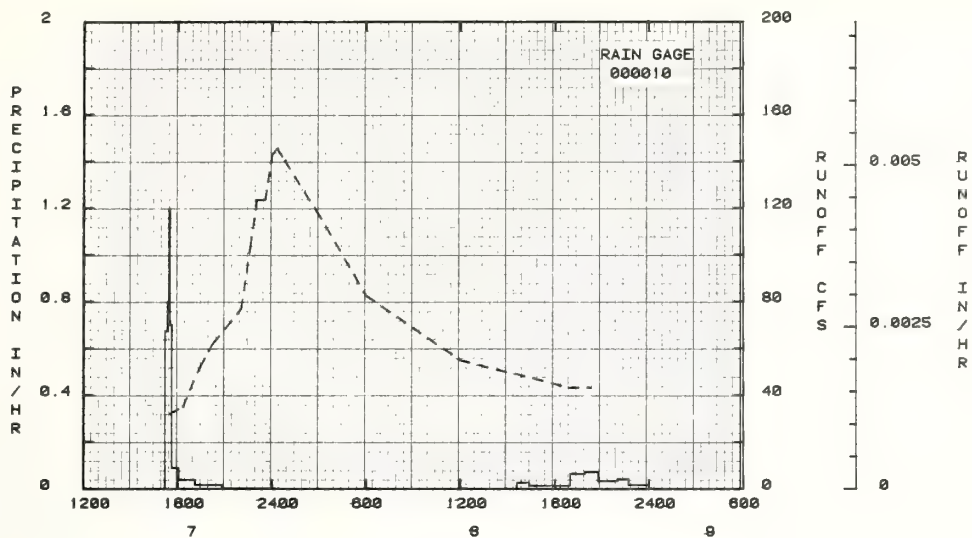
NOTES: For temperature data see table of maximum and minimum values included with information for Watershed 67.001. Daily precipitation values from rain gage R-10. All precipitation is rain except for the months of December, January, and February, during which all precipitation is snow or rain on snow. STA AV based on 11 yr record period.

1969		MEAN DAILY DISCHARGE (cfs)					NORTH DANVILLE, VERMONT WATERSHED #5						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	29.98	37.87	29.36	52.46	315.79	64.18	26.51	42.98	11.34	11.81	21.99	51.68	
2	29.98	34.43	30.36	57.26	293.15	60.81	21.51	58.59	10.91	11.69	22.05	38.05	
3	28.79	34.43	30.41	57.90	301.49	83.49	21.51	109.42	10.55	44.64	61.55	37.67	
4	27.50	34.69	29.74	63.65	265.30	68.55	31.18	43.79	10.56	27.42	213.91	39.64	
5	27.74	33.51	29.51	105.43	107.00	55.85	21.60	190.55	9.38	18.57	329.66	37.74	
6	29.62	32.22	29.62	158.49	162.96	58.61	19.83	87.19	16.79	15.74	209.49	35.85	
7	29.62	30.97	28.08	177.42	166.42	74.34	16.27	64.29	58.06	13.91	120.90	38.49	
8	29.98	29.98	28.19	189.95	202.91	51.67	14.22	51.26	70.08	13.01	136.50	45.24	
9	29.62	31.47	27.61	175.09	302.90	43.46	12.65	63.80	53.55	12.58	86.49	81.87	
10	28.31	31.84	27.50	351.63	121.20	36.91	12.76	71.49	31.09	11.47	68.02	78.00	
11	27.62	29.50	27.15	436.95	256.11	33.53	19.22	68.60	23.08	11.34	73.72	334.29	
12	29.26	28.19	26.58	279.06	200.58	30.24	49.66	39.18	20.42	11.34	89.68	168.46	
13	28.66	28.07	26.24	326.33	167.22	76.13	48.62	30.38	16.73	11.34	108.94	96.20	
14	28.07	27.27	26.24	488.92	186.96	93.80	28.25	25.27	14.16	12.02	83.90	68.79	
15	27.96	27.15	26.24	608.93	152.59	225.49	19.46	22.00	13.57	11.61	127.90	66.37	
16	27.63	27.15	26.58	531.66	122.67	187.11	15.09	20.43	12.51	11.34	81.97	54.07	
17	29.02	26.47	27.43	621.67	111.14	86.60	12.58	55.93	25.24	11.34	64.92	40.74	
18	29.62	26.02	29.65	630.13	298.42	58.59	11.47	36.53	30.80	12.32	61.31	37.78	
19	29.26	26.24	35.55	919.48	222.64	48.33	9.99	40.73	18.20	12.33	59.91	49.81	
20	28.07	26.70	52.05	385.67	868.78	63.60	8.91	30.39	14.86	26.84	245.93	50.78	
21	28.10	28.20	64.57	337.06	269.44	53.70	8.69	22.34	13.53	70.18	107.32	47.14	
22	28.55	29.38	58.91	342.28	171.04	38.43	154.43	19.34	12.48	38.25	68.89	49.10	
23	27.50	29.98	52.25	492.14	145.83	42.67	34.93	17.59	11.88	29.19	68.06	46.50	
24	28.24	29.98	66.80	374.50	132.10	73.41	19.90	17.29	11.36	25.08	70.80	49.41	
25	56.79	26.86	116.85	348.48	126.46	61.58	14.61	17.23	15.22	29.21	48.39	47.81	
26	76.49	32.49	170.61	326.81	133.41	47.92	23.45	23.39	15.16	41.04	60.52	49.44	
27	49.04	30.72	140.52	384.51	104.15	40.81	43.26	17.10	15.48	45.00	56.57	94.06	
28	36.61	29.98	78.05	510.08	106.24	55.77	57.51	14.25	13.76	37.44	35.83	123.03	
29	35.63		70.01	598.39	91.95	33.56	265.13	14.21	12.13	28.05	58.05	82.82	
30	34.57		68.38	340.25	81.81	29.03	92.13	13.47	11.88	24.86	52.50	66.15	
31	43.45		54.37		73.17		107.45	12.07		22.76		60.74	
MEAN	32.94	30.06	49.53	355.62	203.31	65.94	40.09	43.26	20.16	22.57	96.39	69.92	
INCHES	0.885	0.729	1.330	9.244	5.461	1.714	1.077	1.162	0.524	0.606	2.506	1.878	
STA AV	1.364	1.141	2.469	5.965	2.948	1.108	0.610	0.150	0.447	0.992	1.500	1.392	

NOTES: To convert mean daily discharge in CPS to IN/DAY, multiply by 0.0008665. STA AV based on 10 yr record period.

1969 SELECTED RUNOFF EVENT			NORTH DANVILLE, VERMONT WATERSHED W-5							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 7 - 8, 1969										
RG 000010			RG 000010							
9- 7	0.91	0.048	9- 7	1712	0.0	0.0	9- 7	1730	31.97	0.0
				1720	0.6751	0.09		1819	35.09	0.0010
				1726	0.8001	0.17		1928	52.13	0.0027
				1730	1.1995	0.25		2014	62.25	0.0044
				1736	0.7001	0.32		2101	68.53	0.0063
WATERSHED CONDITIONS:										
67% forest; 17% hay; 13%				1803	0.0889	0.36		2202	76.91	0.0090
pastured land; 2% idle land				1906	0.0381	0.40		2237	103.63	0.0109
with dense brush and grass				2051	0.0171	0.43		2302	123.46	0.0126
growth; 1% homesites and				2400	0.0032	0.44		2333	123.46	0.0149
roads.			9- 8	1536	0.0	0.44		2400	142.90	0.0171
				1622	0.0261	0.46	9- 8	19	145.46	0.0187
				1859	0.0115	0.49		48	140.38	0.0212
				1955	0.0643	0.55		248	118.87	0.0306
				2045	0.0720	0.61		600	82.23	0.0422
				2200	0.0320	0.65		1200	54.91	0.0571
				2243	0.0419	0.68		1855	43.09	0.0693
				2400	0.0156	0.70		2016	43.09	0.0714

NOTES: To convert CFS to IN/HR, multiply by 0.000036104. For 30-day antecedent rainfall and runoff, see tables of daily amounts.



EVENT OF SEPTEMBER 7 - 8, 1969
NORTH DANVILLE, VERMONT WATERSHED W-5

REYNOLDS, IDAHO WATERSHED W-1 (036068)

LOCATION: Owyhee County, Idaho; 34 miles south of Nampa; north flowing tributary to the Snake River.

AREA: 57700.00 acres 90.20 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										REYNOLDS, IDAHO WATERSHED W-1 (036068)									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	6.01	1.10	0.54	1.22	0.52	2.88	0.21	0.01	0.39	1.59	0.33	2.18	16.98					
	Q	0.884	0.162	0.402	1.161	0.645	0.240	0.032	0.018	0.011	0.015	0.017	0.041	3.626					
STA AV	P	3.49	1.58	0.65	1.02	0.82	1.68	0.16	1.89	0.30	1.22	1.43	2.15	16.39					
	Q	0.446	0.279	0.231	0.522	0.505	0.296	0.032	0.024	0.012	0.017	0.034	0.238	2.636					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.				
1969		1-21	0.016	1-21	0.015	1-21	0.030	1-21	0.087	1-21	0.165	1-20	0.279	1-20	0.412				

NOTES: Watershed conditions: Predominately sagebrush rangeland, 95%; small stands of forest, 2%; permanent fields of flood irrigated alfalfa, 3%. For revised map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1968, USDA Misc. Pub. 1330, p. 68.1-6. Records began 1963. Precipitation data are Thiessen weighted average 'Computed Actual' amounts from 45 rain gages. Station average precipitation amounts are based on 1968-69 data. Station average runoff amounts are based on the 1963-69 record period. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho; 50 miles N.E. of watershed.

1969 DAILY AIR TEMPERATURE (degrees F)													REYNOLDS, IDAHO WATERSHED W-1 (036068)												
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	
1	45	21	30	18	42	28	57	30	54	24	79	46	89	46	90	54	90	42	72	43	59	35	44	17	
2	42	31	36	20	41	27	63	26	53	29	82	46	86	59	93	57	89	52	52	38	60	29	46	16	
3	37	29	39	13	36	29	54	34	55	28	86	52	73	47	91	52	68	43	50	37	61	29	46	16	
4	39	28	40	18	41	30	65	32	65	39	93	53	73	44	94	57	76	32	52	31	70	34	41	24	
5	53	29	39	23	44	28	62	44	71	39	88	57	74	49	72	40	72	37	58	27	61	42	42	20	
6	54	38	39	24	36	28	46	31	75	45	80	51	72	54	78	41	81	38	62	27	46	34	35	23	
7	50	24	40	26	33	27	46	30	77	47	82	50	75	51	90	44	85	46	66	29	50	36	36	26	
8	26	16	35	20	33	22	53	26	78	43	74	50	81	45	83	48	88	54	85	43	49	30	34	24	
9	32	16	42	30	30	18	62	31	81	45	72	53	87	49	94	50	86	56	52	39	53	27	38	20	
10	40	30	43	27	32	18	54	33	78	48	74	49	93	51	92	55	77	56	49	37	57	29	38	26	
11	42	31	31	29	38	14	57	29	78	49	70	52	93	67	86	59	81	50	52	34	57	36	47	28	
12	43	29	39	28	39	19	66	31	77	50	80	50	78	55	78	54	81	50	40	26	59	38	52	39	
13	46	36	30	18	41	17	52	36	79	50	74	54	82	49	85	49	82	53	42	24	60	34	49	35	
14	46	31	30	18	46	22	51	33	68	48	66	47	81	54	97	51	64	37	47	21	61	30	69	35	
15	34	19	33	25	53	24	53	35	68	44	76	57	79	53	94	59	71	33	47	20	58	28	45	29	
16	31	23	43	23	53	25	62	33	78	38	73	53	82	50	81	54	76	38	49	38	40	29	47	28	
17	36	21	38	21	49	38	67	35	76	44	80	51	86	51	82	47	80	41	42	34	37	23	45	31	
18	38	18	38	28	47	28	51	34	75	51	84	52	88	54	88	58	79	49	52	33	41	21	46	29	
19	43	31	40	22	45	26	66	30	55	37	79	56	91	55	84	49	67	45	59	39	44	22	45	30	
20	47	31	33	20	46	19	57	30	59	33	77	51	92	58	86	52	61	41	63	36	51	19	46	37	
21	44	36	33	24	48	26	71	33	67	35	77	54	92	59	95	53	63	42	66	35	46	23	56	34	
22	39	20	36	24	56	23	73	40	76	39	68	48	87	54	97	54	73	35	68	35	46	21	42	32	
23	24	5	36	27	39	25	59	38	82	42	64	49	89	57	101	61	74	45	67	38	47	17	44	29	
24	29	5	32	22	46	18	44	30	82	55	60	47	90	60	98	71	69	48	52	41	45	24	40	26	
25	42	23	39	25	55	20	45	26	82	49	58	43	83	53	78	54	75	40	54	32	44	19	38	23	
26	45	25	36	23	61	26	45	30	79	57	60	40	86	48	90	43	79	43	56	27	44	17	37	24	
27	31	22	33	20	62	33	60	28	68	45	58	36	97	61	76	48	85	45	60	34	42	14	33	22	
28	27	12	39	23	64	32	74	33	74	38	59	37	91	69	74	44	77	47	50	36	41	11	31	16	
29	22	10			67	29	51	30	83	41	64	45	91	56	75	43	80	45	55	30	47	15	30	16	
30	29	21			67	37	60	24	74	50	76	36	91	59	78	37	70	50	55	29	48	24	37	18	
31	32	20			57	37			70	42			90	60	81	41			59	36			36	18	
AV.	38	23	42	22	46	25	58	31	72	42	73	48	85	54	86	51	76	44	55	33	50	26	42	25	
MEAN	31.0		33.2		36.2		45.6		57.5		61.3		69.7		68.8		60.6		44.3		38.6		34.0		
STA AV	36	18	43	25	46	25	54	29	66	38	73	46	85	51	83	49	76	43	62	33	48	26	39	20	

NOTES: Temperature data taken from hygrothermograph record at station 076X59. STA AV is average for 7 yr (1963-69) record period.

1969 DAILY PRECIPITATION (inches)												REYNOLDS, IDAHO WATERSHED W-1 (036068)											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec											
1	0.05	0.12	0.05	0.00	0.02	0.0	0.0	0.00	0.0	0.21	0.0	0.0											
2	0.01	0.04	0.01	0.00	0.0	0.0	0.0	0.0	0.0	0.19	0.00	0.00											
3	0.01	0.01	0.05	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00											
4	0.01	0.00	0.01	0.0	0.00	0.00	0.0	0.00	0.0	0.00	0.00	0.02											
5	0.00	0.03	0.08	0.04	0.0	0.21	0.00	0.0	0.0	0.0	0.06	0.00											
6	0.0	0.07	0.06	0.76	0.0	0.13	0.01	0.0	0.0	0.0	0.13	0.00											
7	0.17	0.00	0.02	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.00											
8	0.01	0.00	0.10	0.0	0.0	0.39	0.0	0.00	0.00	0.15	0.0	0.19											
9	0.00	0.09	0.02	0.0	0.0	0.06	0.0	0.00	0.18	0.01	0.0	0.02											
10	0.00	0.03	0.01	0.0	0.0	0.41	0.0	0.00	0.01	0.19	0.0	0.06											
11	0.26	0.00	0.0	0.0	0.0	0.09	0.0	0.0	0.00	0.00	0.00	0.14											
12	0.49	0.19	0.0	0.00	0.09	0.01	0.0	0.0	0.00	0.00	0.0	0.09											
13	0.30	0.00	0.0	0.0	0.13	0.00	0.0	0.0	0.00	0.00	0.0	0.02											
14	0.00	0.02	0.0	0.00	0.20	0.00	0.00	0.0	0.0	0.0	0.00	0.01											
15	0.10	0.15	0.0	0.01	0.00	0.00	0.00	0.0	0.0	0.04	0.08	0.0											
16	0.00	0.04	0.00	0.0	0.00	0.0	0.0	0.0	0.0	0.23	0.04	0.00											
17	0.00	0.00	0.06	0.03	0.0	0.0	0.00	0.0	0.00	0.37	0.00	0.00											
18	0.07	0.00	0.05	0.24	0.02	0.00	0.00	0.0	0.01	0.01	0.00	0.0											
19	1.25	0.00	0.0	0.00	0.05	0.43	0.0	0.0	0.03	0.00	0.0	0.32											
20	1.03	0.00	0.00	0.00	0.0	0.01	0.0	0.0	0.14	0.00	0.00	0.24											
21	0.83	0.06	0.00	0.0	0.0	0.05	0.0	0.0	0.02	0.0	0.00	0.60											
22	0.12	0.02	0.00	0.01	0.0	0.02	0.0	0.0	0.00	0.0	0.0	0.05											
23	0.04	0.05	0.00	0.05	0.0	0.40	0.0	0.0	0.00	0.0	0.0	0.21											
24	0.00	0.13	0.0	0.06	0.0	0.24	0.08	0.00	0.0	0.0	0.0	0.01											
25	0.31	0.02	0.0	0.01	0.0	0.12	0.12	0.00	0.0	0.0	0.0	0.09											
26	0.29	0.01	0.0	0.0	0.0	0.01	0.00	0.0	0.0	0.0	0.0	0.13											
27	0.16	0.00	0.0	0.0	0.0	0.20	0.00	0.0	0.0	0.09	0.00	0.01											
28	0.25	0.00	0.0	0.0	0.0	0.07	0.00	0.0	0.0	0.11	0.0	0.00											
29	0.05	0.00	0.00	0.00	0.0	0.01	0.00	0.0	0.00	0.00	0.0	0.00											
30	0.09	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00											
31	0.11		0.01		0.0		0.00	0.0		0.0		0.0											
TOTAL	6.01	1.10	0.54	1.22	0.52	2.88	0.21	0.01	0.39	1.59	0.33	2.18											
STA AV	3.49	1.58	0.65	1.02	0.82	1.68	0.16	1.89	0.30	1.22	1.43	2.15											

NOTES: Values are Thiessen weighted average 'Actual' amounts from 45 recording pairs of gages (shielded and unshielded). 'Actual' amounts were computed as per relationship developed by W. R. Hanson, "Computing Actual Precipitation", Proceedings of WHO-IDHS Symposium, Geilo, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) \times 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period.

1969 DAILY PRECIPITATION (inches)												REYNOLDS, IDAHO WATERSHED W-1 (036068)											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec											
1	0.03	0.06	0.04	0.00	0.02	0.0	0.0	0.00	0.0	0.20	0.0	0.0											
2	0.01	0.02	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.17	0.00	0.0											
3	0.01	0.01	0.03	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00											
4	0.00	0.00	0.00	0.0	0.00	0.00	0.0	0.00	0.0	0.00	0.00	0.01											
5	0.00	0.02	0.04	0.02	0.0	0.20	0.00	0.0	0.0	0.0	0.05	0.00											
6	0.0	0.05	0.04	0.35	0.0	0.12	0.01	0.0	0.0	0.0	0.11	0.00											
7	0.10	0.00	0.02	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.00											
8	0.01	0.00	0.07	0.0	0.0	0.36	0.0	0.00	0.00	0.12	0.0	0.13											
9	0.00	0.05	0.02	0.0	0.0	0.05	0.0	0.00	0.17	0.01	0.0	0.01											
10	0.00	0.02	0.01	0.0	0.0	0.36	0.0	0.00	0.01	0.15	0.0	0.04											
11	0.17	0.00	0.0	0.0	0.0	0.07	0.0	0.0	0.00	0.00	0.00	0.09											
12	0.37	0.13	0.0	0.00	0.09	0.01	0.0	0.0	0.00	0.00	0.0	0.05											
13	0.23	0.00	0.0	0.0	0.12	0.00	0.0	0.0	0.00	0.00	0.0	0.01											
14	0.00	0.01	0.0	0.00	0.19	0.00	0.00	0.0	0.0	0.0	0.00	0.00											
15	0.07	0.10	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.03	0.07	0.0											
16	0.00	0.03	0.00	0.0	0.00	0.0	0.0	0.0	0.0	0.17	0.04	0.00											
17	0.00	0.00	0.05	0.02	0.0	0.0	0.00	0.0	0.00	0.31	0.00	0.00											
18	0.05	0.00	0.04	0.17	0.02	0.00	0.00	0.0	0.01	0.00	0.00	0.0											
19	1.01	0.00	0.0	0.00	0.05	0.39	0.0	0.0	0.03	0.00	0.0	0.26											
20	0.84	0.00	0.00	0.00	0.0	0.01	0.0	0.0	0.13	0.00	0.00	0.20											
21	0.67	0.03	0.00	0.0	0.0	0.04	0.0	0.0	0.02	0.0	0.00	0.49											
22	0.08	0.01	0.00	0.01	0.0	0.02	0.0	0.0	0.00	0.0	0.0	0.03											
23	0.03	0.02	0.00	0.04	0.0	0.34	0.0	0.0	0.00	0.0	0.0	0.16											
24	0.00	0.09	0.0	0.05	0.0	0.21	0.07	0.00	0.0	0.0	0.0	0.00											
25	0.18	0.01	0.0	0.00	0.0	0.10	0.12	0.00	0.0	0.0	0.0	0.05											
26	0.16	0.00	0.0	0.0	0.0	0.01	0.00	0.0	0.0	0.0	0.0	0.08											
27	0.08	0.00	0.0	0.0	0.0	0.18	0.00	0.0	0.0	0.08	0.00	0.01											
28	0.13	0.00	0.0	0.0	0.0	0.06	0.00	0.0	0.0	0.09	0.0	0.00											
29	0.02	0.00	0.00	0.00	0.0	0.01	0.00	0.0	0.00	0.00	0.0	0.00											
30	0.05	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00											
31	0.05		0.01		0.0		0.00	0.0		0.0		0.0											
TOTAL	4.36	0.69	0.36	0.67	0.49	2.55	0.21	0.01	0.36	1.34	0.27	1.64											
STA AV																							

NOTES: Values are Thiessen weighted average amounts from 45 unshielded recording gages. STA AV do not apply to unshielded rain gage records.

1969 DAILY PRECIPITATION (inches)													REYNOLDS, IDAHO WATERSHED W-1 (036068)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.04	0.09	0.04	0.00	0.02	0.0	0.0	0.00	0.0	0.21	0.0	0.0													
2	0.01	0.03	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.18	0.00	0.00													
3	0.01	0.01	0.04	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.0	0.00													
4	0.01	0.00	0.00	0.0	0.00	0.00	0.0	0.00	0.0	0.00	0.00	0.01													
5	0.00	0.03	0.06	0.03	0.0	0.20	0.00	0.0	0.0	0.0	0.05	0.00													
6	0.0	0.06	0.05	0.53	0.0	0.13	0.01	0.0	0.0	0.0	0.12	0.00													
7	0.13	0.00	0.02	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.00													
8	0.01	0.00	0.09	0.0	0.0	0.38	0.0	0.00	0.00	0.14	0.0	0.16													
9	0.00	0.07	0.02	0.0	0.0	0.06	0.0	0.00	0.17	0.01	0.0	0.01													
10	0.00	0.02	0.01	0.0	0.0	0.38	0.0	0.00	0.01	0.17	0.0	0.05													
11	0.21	0.00	0.0	0.0	0.0	0.08	0.0	0.0	0.00	0.00	0.00	0.11													
12	0.43	0.16	0.0	0.00	0.09	0.01	0.0	0.0	0.00	0.00	0.0	0.07													
13	0.27	0.00	0.0	0.0	0.12	0.00	0.0	0.0	0.00	0.00	0.0	0.01													
14	0.00	0.01	0.0	0.00	0.20	0.00	0.00	0.0	0.0	0.0	0.00	0.00													
15	0.09	0.12	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.03	0.00	0.29													
16	0.00	0.03	0.00	0.0	0.00	0.0	0.0	0.0	0.0	0.20	0.04	0.00													
17	0.00	0.00	0.05	0.02	0.0	0.0	0.00	0.0	0.00	0.34	0.00	0.00													
18	0.06	0.00	0.04	0.20	0.02	0.00	0.00	0.0	0.01	0.01	0.00	0.0													
19	1.14	0.00	0.0	0.00	0.05	0.41	0.0	0.0	0.03	0.00	0.0	0.29													
20	0.94	0.00	0.00	0.00	0.0	0.01	0.0	0.0	0.13	0.00	0.00	0.22													
21	0.76	0.05	0.00	0.0	0.0	0.04	0.0	0.0	0.02	0.0	0.00	0.55													
22	0.10	0.01	0.00	0.01	0.0	0.02	0.0	0.0	0.00	0.0	0.0	0.04													
23	0.04	0.03	0.00	0.04	0.0	0.37	0.0	0.0	0.00	0.0	0.0	0.18													
24	0.00	0.11	0.0	0.05	0.0	0.22	0.08	0.00	0.0	0.0	0.0	0.00													
25	0.24	0.02	0.0	0.00	0.0	0.11	0.12	0.00	0.0	0.0	0.0	0.07													
26	0.22	0.01	0.0	0.0	0.0	0.01	0.00	0.0	0.0	0.0	0.0	0.10													
27	0.11	0.00	0.0	0.0	0.0	0.19	0.00	0.0	0.0	0.08	0.00	0.01													
28	0.19	0.00	0.0	0.0	0.0	0.07	0.00	0.0	0.0	0.10	0.0	0.00													
29	0.03	0.00	0.00	0.00	0.0	0.01	0.00	0.0	0.00	0.00	0.0	0.00													
30	0.07	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.00	0.00	0.00													
31	0.08	0.01	0.01	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0													
TOTAL	5.18	0.89	0.45	0.92	0.50	2.72	0.21	0.01	0.37	1.47	0.30	1.90													
STA AV																									

NOTES: Values are Thiessen weighted average amounts from 45 shielded recording gages. STA AV do not apply to shielded rain gage records.

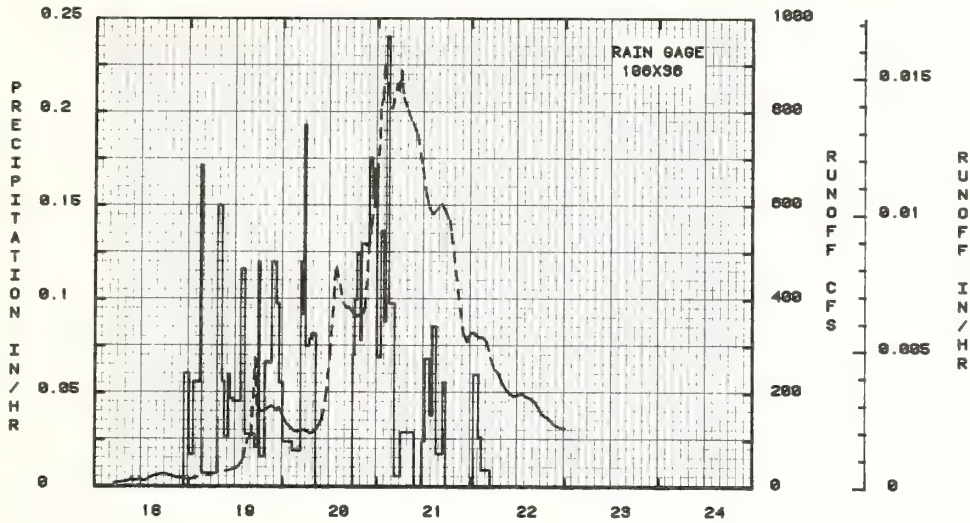
1969 MEAN DAILY DISCHARGE (cfs)													REYNOLDS, IDAHO WATERSHED W-1 (036068)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	4.67	25.61	13.68	126.29	43.91	21.63	7.88	1.18	1.09	0.73	1.40	1.43													
2	5.65	21.07	11.75	127.90	40.92	20.29	6.27	1.06	1.03	0.90	1.40	1.01													
3	4.53	18.84	11.85	113.89	37.14	17.13	5.96	1.06	1.06	0.81	1.31	0.91													
4	4.70	21.96	12.14	114.80	34.85	16.52	3.63	1.03	1.03	0.81	1.23	0.88													
5	12.92	23.24	13.62	146.68	37.37	19.38	2.60	1.09	0.94	0.78	1.28	0.88													
6	20.48	19.55	13.57	120.02	44.26	21.50	2.81	1.07	0.79	0.82	1.57	1.36													
7	15.79	14.03	12.15	94.65	53.71	21.27	3.07	1.03	0.76	0.77	1.44	1.72													
8	7.30	12.50	11.78	97.12	58.75	30.61	3.39	1.01	0.81	0.69	1.34	1.73													
9	8.65	13.57	9.98	125.67	64.92	28.65	2.57	1.01	0.88	0.70	1.41	1.95													
10	9.31	12.10	9.27	112.69	71.56	36.57	2.73	1.01	0.91	0.92	1.39	1.92													
11	10.00	13.98	10.76	101.14	74.98	39.79	2.70	1.01	0.88	0.88	1.36	2.21													
12	15.12	19.46	11.77	115.57	69.81	27.96	2.69	1.07	0.88	0.94	1.28	2.94													
13	90.64	14.31	11.53	114.34	75.57	26.35	2.98	1.48	0.88	0.96	1.34	2.89													
14	93.66	10.24	11.29	99.48	87.47	23.70	2.86	1.14	0.88	1.05	1.37	2.76													
15	37.91	11.93	13.25	84.65	83.65	20.64	2.37	1.20	0.91	1.02	1.40	2.57													
16	23.60	10.43	16.21	80.40	70.49	18.99	1.59	1.41	0.88	1.28	1.44	2.10													
17	17.28	9.02	27.10	89.70	60.59	16.21	1.48	1.61	0.86	1.91	1.35	2.42													
18	17.16	11.61	38.22	96.01	61.05	14.09	1.76	1.66	0.82	1.47	1.33	2.42													
19	83.33	12.53	27.71	76.58	60.73	27.04	1.59	1.63	0.86	1.28	1.39	2.65													
20	282.86	10.12	29.50	76.38	53.19	15.53	1.44	1.86	0.91	1.23	1.36	6.18													
21	653.57	9.03	28.94	85.52	44.34	11.38	1.35	2.14	0.93	1.23	1.35	10.88													
22	211.42	9.21	36.69	100.85	35.39	9.68	1.27	2.24	0.91	1.26	1.32	10.52													
23	96.03	9.89	31.33	104.32	36.10	11.15	1.32	2.37	0.88	1.38	1.30	6.85													
24	72.49	10.44	23.40	92.24	37.15	17.52	1.35	2.31	0.81	1.40	1.32	5.68													
25	77.71	10.98	30.63	67.82	37.70	14.42	1.40	2.10	0.81	1.41	1.39	4.09													
26	84.44	14.27	49.75	52.41	37.07	12.36	1.26	1.78	0.81	1.45	1.33	3.94													
27	50.72	11.77	56.68	49.16	35.99	11.34	1.23	1.33	0.70	1.40	1.27	2.80													
28	45.90	11.35	70.61	49.70	32.87	11.30	1.23	1.35	0.68	1.50	1.28	2.33													
29	30.27		85.34	51.81	28.71	10.38	1.23	1.44	0.74	1.53	1.31	2.90													
30	28.80		102.25	45.86	26.77	7.97	1.23	1.30	0.72	1.44	1.42	3.46													
31	25.53		140.67		26.15		1.32	1.27		1.40		3.24													
MEAN	69.111	14.036	31.401	93.786	50.426	19.377	2.469	1.428	0.869	1.141	1.357	3.213													
INCHES	0.884	0.162	0.402	1.161	0.645	0.240	0.032	0.018	0.011	0.015	0.017	0.041													
STA AV	0.446	0.279	0.231	0.522	0.505	0.296	0.032	0.024	0.012	0.017	0.034	0.238													

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO WATERSHED W-1 (036068)						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
									Acc. (inches)
EVENT OF JANUARY 18 - 22, 1969									
RG 106X36			RG 106X36						
1-18	0.0	0.001	1-18	2241	0.0	0.0	1-18	456	9.720
				2400	0.0607	0.08		802	12.340
			1-19	109	0.0174	0.10		856	14.850
				245	0.0562	0.19		926	20.660
				313	0.1715	0.27		946	13.770
WATERSHED CONDITIONS: Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted the low lying snow.				553	0.0075	0.29		1006	13.770
				714	0.0074	0.30		1020	15.520
				826	0.1500	0.48		1102	14.630
				858	0.0562	0.51		1122	18.110
				1005	0.0269	0.54		1140	18.110
				1025	0.0600	0.56		1208	13.770
				1116	0.0471	0.60		1236	13.350
				1314	0.0458	0.69		1242	13.990
				1416	0.1161	0.81		1448	23.400
				1646	0.0280	0.88		1548	26.630
				1742	0.0214	0.90		1656	28.180
				1807	0.1200	0.95		1806	27.560
				1920	0.0164	0.97		2046	20.930
				2108	0.0667	1.09		2400	16.910
				2223	0.1200	1.24	1-19	1200	40.110
				2306	0.0977	1.31		1300	47.480
				2400	0.0555	1.36		1400	61.550
			1-20	229	0.0242	1.42		1445	93.240
				433	0.0194	1.46		1500	101.510
				453	0.1199	1.50		1600	110.270
				519	0.0923	1.54		1700	275.550
				547	0.1929	1.63		1730	150.420
				643	0.0750	1.70		1800	161.800
				721	0.0790	1.75		1900	161.800
				827	0.0818	1.84		2000	167.700
				1745	0.0	1.84		2100	173.750
				1819	0.0706	1.88		2200	167.700
				1849	0.1000	1.93		2230	161.800
				1942	0.1245	2.04		2300	170.710
				2005	0.0783	2.07		2330	159.860
				2119	0.1297	2.23		2400	150.420
				2201	0.1286	2.32	1-20	100	134.370
				2242	0.1756	2.44		200	127.630
				2321	0.1539	2.54		300	117.950
				2400	0.1692	2.65		400	119.520
			1-21	101	0.0689	2.72		500	121.920
				145	0.1364	2.82		600	119.520
				219	0.0882	2.87		700	114.830
				259	0.2401	3.03		800	119.520
				342	0.0977	3.10		900	129.290
				425	0.0977	3.17		1000	144.930
				605	0.0060	3.18		1100	192.740
				930	0.0293	3.28		1200	283.960
				1127	0.0	3.28		1300	406.040
				1216	0.0245	3.30		1310	441.450
				1326	0.0686	3.38		1337	467.170
				1413	0.0383	3.41		1430	430.860
				1509	0.0857	3.49		1515	393.100
				1651	0.0176	3.52		1615	381.610
				1734	0.0558	3.56		1645	383.680
			1-22	39	0.0	3.56		1737	372.460
				159	0.0600	3.64		1845	364.510
				244	0.0267	3.66		1945	366.480
				456	0.0091	3.68		2030	371.460
								2055	381.610
								2145	499.760
								2225	558.200
								2320	608.520
								2400	668.760
							1-21	35	744.950
								50	814.300
								120	832.060
								145	894.920
								200	899.760
								237	847.920
								330	807.740
								345	807.740
								500	859.430
								520	845.640
								600	887.700

NOTES: To convert CFS to IN/HR, multiply by 0.00001719.

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO WATERSHED W-1 (036068)							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 18 - 22, 1969 (CONTINUED)										
							1-21	610	859.430	0.2454
								640	829.820	0.2527
								740	803.390	0.2667
								900	775.710	0.2848
								1015	751.000	0.3012
								1130	677.840	0.3165
								1230	625.150	0.3277
								1315	595.530	0.3356
								1415	561.250	0.3457
								1630	603.610	0.3686
								1715	592.320	0.3763
								1830	567.310	0.3888
								1900	539.720	0.3936
								2200	328.730	0.4160
								2300	310.260	0.4215
							1-22	2400	328.730	0.4270
								100	328.730	0.4327
								200	319.400	0.4383
								300	319.400	0.4438
								400	310.260	0.4492
								500	275.550	0.4542
								600	251.350	0.4587
								700	243.610	0.4630
								800	221.350	0.4670
								900	207.290	0.4707
								1000	199.370	0.4742
								1100	192.740	0.4776
								1200	197.150	0.4810
								1300	199.370	0.4844
								1400	192.740	0.4878
								1500	189.490	0.4911
								1600	184.140	0.4943
								1700	173.750	0.4974
								1800	156.040	0.5002
								1900	150.420	0.5028
								2000	144.930	0.5053
								2100	134.370	0.5077
								2200	129.290	0.5100
								2300	126.800	0.5122
								2400	124.340	0.5144

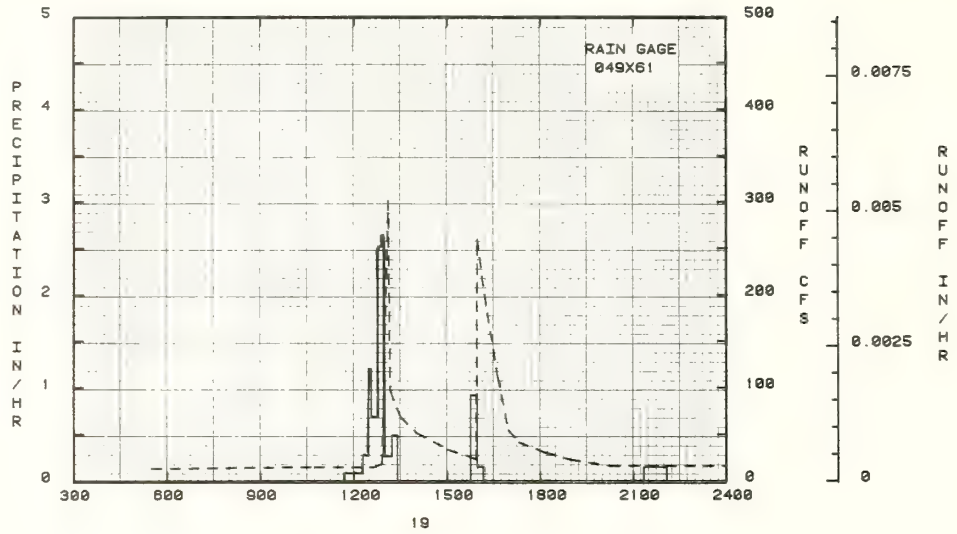
NOTES: To convert CFS to IN/HR, multiply by 0.00001719.



EVENT OF JANUARY 18 - 22, 1969
REYNOLDS, IDAHO WATERSHED W-1 (036068)

1969 SELECTED RUNOFF EVENT				REYNOLDS, IDAHO WATERSHED W-1 (036068)						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 19, 1969										
RG 049161			RG 049161							
6-19	0.0	0.001	6-19	1140	0.0	0.0	6-19	530	13.150	0.0
				1217	0.0811	0.05		1044	15.070	0.0013
				1228	0.2727	0.10		1236	14.200	0.0018
				1233	1.2000	0.20		1254	18.110	0.0019
				1247	0.6857	0.36		1306	301.310	0.0024
WATERSHED CONDITIONS: Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted the low lying snow.				1252	2.5200	0.57		1310	95.940	0.0026
				1257	2.6400	0.79		1330	67.850	0.0031
				1313	0.2625	0.86		1402	51.010	0.0036
				1324	0.4909	0.95		1502	33.140	0.0043
				1545	0.0	0.95		1556	22.830	0.0047
				1558	0.9231	1.15		1558	259.250	0.0048
				1610	0.1500	1.18		1612	199.370	0.0057
				2120	0.0	1.18		1638	111.020	0.0069
				2204	0.1500	1.29		1658	53.760	0.0074
								1718	40.900	0.0077
								1810	29.780	0.0082
								1858	22.560	0.0086
								2016	15.980	0.0090
								2400	15.750	0.0100

NOTES: To convert CFS to IN/HR, multiply by 0.00001719.



EVENT OF JUNE 19, 1969
REYNOLDS, IDAHO WATERSHED W-1 (036068)

REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)

LOCATION: Owyhee County, Idaho; 34 miles south of Nampa; east flowing tributary to Reynolds Creek, Snake River Basin.

AREA: 8990.00 acres 14.05 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)															REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	6.05	1.30	0.58	1.89	0.67	3.62	0.14	0.0	0.53	2.48	0.37	2.40	20.03															
	Q	1.024	0.310	0.472	0.878	0.241	0.089	0.017	0.002	0.010	0.027	0.039	0.071	3.180															
STA AV	P	3.45	1.90	0.70	1.43	1.17	2.00	0.12	1.79	0.39	1.70	1.44	2.23	18.32															
	Q	0.684	0.378	0.295	0.402	0.304	0.147	0.026	0.056	0.025	0.036	0.059	0.089	2.501															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge				1 Hour		2 Hours		Maximum Volume for Selected Time Interval																			
		Date	Date	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days																	
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		1-21	0.023	1-21	0.021	1-21	0.040	1-20	0.115	1-20	0.206	1-20	0.344	1-20	0.519	1-19	0.748												
MAXIMUMS FOR PERIOD OF RECORD																													
		8-23	0.073	8-23	0.044	8-23	0.056	1-20	0.115	1-28	0.208	1-28	0.379	1-28	0.766	1-28	1.495												
		1965		1965		1965		1969		1965		1965		1965		1965													

NOTES: Watershed conditions: Predominately sagebrush rangeland, 99%; irrigated pasture and hay crops, 1%. For map of Watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 68.2-7. Records began 1963. Precipitation: Thiessen weighted average 'Computed Actual' amounts from 9 rain gages. Station average precipitation amounts are based on 1968-69 data. Station average runoff amounts are based on record period (1963-69). For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho; 59 miles N.E. of watershed.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.08	0.16	0.03	0.0	0.06	0.0	0.0	0.0	0.0	0.35	0.0	0.0	
2	0.00	0.06	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.00	
3	0.00	0.00	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
5	0.0	0.02	0.09	0.01	0.0	0.18	0.00	0.0	0.0	0.0	0.03	0.0	
6	0.0	0.12	0.07	1.11	0.0	0.06	0.03	0.0	0.0	0.0	0.10	0.0	
7	0.17	0.01	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	
8	0.0	0.0	0.19	0.0	0.0	0.70	0.0	0.0	0.0	0.26	0.0	0.32	
9	0.0	0.09	0.03	0.0	0.0	0.02	0.0	0.0	0.08	0.0	0.0	0.01	
10	0.01	0.06	0.0	0.0	0.0	0.24	0.0	0.0	0.02	0.33	0.0	0.05	
11	0.24	0.01	0.0	0.0	0.0	0.30	0.0	0.0	0.00	0.0	0.00	0.07	
12	0.52	0.29	0.0	0.0	0.12	0.00	0.0	0.0	0.0	0.0	0.0	0.09	
13	0.39	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.01	
14	0.00	0.00	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.01	
15	0.11	0.19	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.06	0.17	0.0	
16	0.01	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.05	0.0	
17	0.00	0.00	0.07	0.04	0.0	0.0	0.0	0.0	0.0	0.56	0.00	0.0	
18	0.05	0.0	0.01	0.55	0.05	0.0	0.0	0.0	0.00	0.00	0.0	0.0	
19	1.37	0.0	0.0	0.00	0.08	0.63	0.0	0.0	0.06	0.0	0.0	0.30	
20	0.99	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.35	0.0	0.0	0.28	
21	0.79	0.01	0.0	0.0	0.0	0.09	0.0	0.0	0.02	0.0	0.0	0.71	
22	0.11	0.01	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.03	
23	0.03	0.02	0.00	0.07	0.0	0.35	0.0	0.0	0.01	0.0	0.0	0.19	
24	0.0	0.16	0.0	0.08	0.0	0.50	0.03	0.0	0.0	0.0	0.0	0.0	
25	0.34	0.01	0.0	0.00	0.0	0.14	0.08	0.0	0.0	0.0	0.0	0.24	
26	0.31	0.01	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.07	
27	0.24	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.15	0.0	0.00	
28	0.17	0.00	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.12	0.0	0.0	
29	0.03	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	
30	0.05	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.0	
31	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	6.05	1.30	0.58	1.89	0.67	3.62	0.14	0.0	0.53	2.48	0.37	2.40	
STA AV	3.45	1.90	0.70	1.43	1.17	2.00	0.12	1.79	0.39	1.70	1.44	2.23	

NOTES: Values are Thiessen weighted average 'Actual' amounts from 9 recording pairs of gages (shielded and unshielded). 'Actual' amounts were computed as per relationship developed by W. R. Hamon, "Computing Actual Precipitation", Proceedings WHO-IDHS Symposium, Gailo, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) \times 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period. For temperature information, see table of daily maximum and minimum values included for Watershed 68.001.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.07	0.08	0.03	0.0	0.04	0.0	0.0	0.0	0.0	0.31	0.0	0.0
2	0.00	0.03	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0
3	0.00	0.00	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
5	0.0	0.01	0.05	0.00	0.0	0.17	0.00	0.0	0.0	0.0	0.03	0.0
6	0.0	0.08	0.05	0.57	0.0	0.05	0.02	0.0	0.0	0.0	0.10	0.0
7	0.14	0.00	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0
8	0.0	0.0	0.13	0.0	0.0	0.65	0.0	0.0	0.0	0.21	0.0	0.22
9	0.0	0.07	0.02	0.0	0.0	0.02	0.0	0.0	0.08	0.0	0.0	0.01
10	0.01	0.04	0.0	0.0	0.0	0.20	0.0	0.0	0.02	0.24	0.0	0.04
11	0.20	0.01	0.0	0.0	0.0	0.27	0.0	0.0	0.00	0.0	0.00	0.06
12	0.45	0.22	0.0	0.0	0.12	0.00	0.0	0.0	0.0	0.0	0.0	0.07
13	0.20	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.01
14	0.00	0.00	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.01
15	0.09	0.14	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.04	0.14	0.0
16	0.01	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.04	0.0
17	0.0	0.00	0.05	0.03	0.0	0.0	0.0	0.0	0.0	0.47	0.00	0.0
18	0.04	0.0	0.00	0.34	0.04	0.0	0.0	0.0	0.00	0.00	0.0	0.0
19	1.23	0.0	0.0	0.00	0.08	0.53	0.0	0.0	0.05	0.0	0.0	0.25
20	0.86	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.31	0.0	0.0	0.23
21	0.67	0.01	0.0	0.0	0.0	0.07	0.0	0.0	0.02	0.0	0.0	0.60
22	0.09	0.01	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.02
23	0.02	0.02	0.00	0.05	0.0	0.28	0.0	0.0	0.01	0.0	0.0	0.14
24	0.0	0.12	0.0	0.06	0.0	0.42	0.03	0.0	0.0	0.0	0.0	0.0
25	0.26	0.01	0.0	0.00	0.0	0.11	0.08	0.0	0.0	0.0	0.0	0.13
26	0.16	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.04
27	0.13	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.14	0.0	0.00
28	0.09	0.00	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.11	0.0	0.0
29	0.01	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
30	0.02	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.00	0.0
31	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.79	0.88	0.41	1.06	0.61	3.13	0.14	0.0	0.49	2.00	0.32	1.84
STA AV												

NOTES: Values are Thiessen weighted average amounts from 9 unshielded recording gages. STA AV do not apply to unshielded rain gage records.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.08	0.11	0.03	0.0	0.05	0.0	0.0	0.0	0.0	0.33	0.0	0.0
2	0.00	0.04	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.00
3	0.00	0.00	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
5	0.0	0.02	0.06	0.01	0.0	0.18	0.00	0.0	0.0	0.0	0.03	0.0
6	0.0	0.10	0.06	0.81	0.0	0.05	0.03	0.0	0.0	0.0	0.10	0.0
7	0.16	0.00	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0
8	0.0	0.0	0.16	0.0	0.0	0.67	0.0	0.0	0.0	0.24	0.0	0.27
9	0.0	0.08	0.02	0.0	0.0	0.02	0.0	0.0	0.08	0.0	0.0	0.01
10	0.01	0.05	0.0	0.0	0.0	0.22	0.0	0.0	0.02	0.29	0.0	0.05
11	0.22	0.01	0.0	0.0	0.0	0.28	0.0	0.0	0.00	0.0	0.00	0.07
12	0.49	0.25	0.0	0.0	0.12	0.00	0.0	0.0	0.0	0.0	0.0	0.08
13	0.28	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.01
14	0.00	0.00	0.0	0.0	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.01
15	0.10	0.16	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.05	0.15	0.0
16	0.01	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.04	0.0
17	0.00	0.00	0.06	0.04	0.0	0.0	0.0	0.0	0.0	0.51	0.00	0.0
18	0.04	0.0	0.01	0.44	0.05	0.0	0.0	0.0	0.00	0.00	0.0	0.0
19	1.31	0.0	0.0	0.01	0.08	0.58	0.0	0.0	0.05	0.0	0.0	0.28
20	0.93	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.33	0.0	0.0	0.26
21	0.73	0.02	0.0	0.0	0.0	0.08	0.0	0.0	0.02	0.0	0.0	0.67
22	0.10	0.01	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.02
23	0.03	0.02	0.00	0.06	0.0	0.32	0.0	0.0	0.01	0.0	0.0	0.16
24	0.0	0.14	0.0	0.08	0.0	0.46	0.03	0.0	0.0	0.0	0.0	0.0
25	0.30	0.01	0.0	0.00	0.0	0.12	0.08	0.0	0.0	0.0	0.0	0.18
26	0.23	0.01	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.05
27	0.19	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.14	0.0	0.00
28	0.12	0.00	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.11	0.0	0.0
29	0.02	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
30	0.03	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.0
31	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	5.42	1.08	0.49	1.46	0.64	3.39	0.14	0.0	0.51	2.24	0.35	2.13
STA AV												

NOTES: Values are Thiessen weighted average amounts from 9 shielded recording gages. STA AV do not apply to shielded rain gage records.

1969 MEAN DAILY DISCHARGE (cfs) REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.91	7.93	2.55	16.85	4.92	1.16	0.73	0.02	0.03	0.24	0.50	0.48
2	1.23	7.93	2.63	15.57	4.54	1.06	0.60	0.02	0.04	0.24	0.57	0.63
3	1.13	7.93	2.82	13.97	4.27	0.96	0.53	0.02	0.05	0.25	0.54	0.67
4	1.23	8.08	2.75	13.04	3.98	0.87	0.56	0.02	0.05	0.27	0.49	0.67
5	3.62	8.08	2.90	13.83	3.82	0.91	0.48	0.01	0.06	0.28	0.53	0.66
6	4.00	7.64	3.01	14.42	3.70	1.03	0.48	0.01	0.06	0.27	0.60	0.66
7	3.31	4.34	2.82	13.24	3.74	0.90	0.42	0.00	0.07	0.13	0.56	0.66
8	2.20	4.01	2.97	13.47	3.74	2.15	0.38	0.00	0.07	0.04	0.54	0.66
9	2.44	2.82	2.81	14.96	3.68	1.88	0.31	0.0	0.07	0.09	0.52	0.70
10	2.26	2.94	2.47	15.07	3.67	1.56	0.27	0.0	0.09	0.19	0.51	0.61
11	2.35	3.15	2.46	14.49	3.58	1.90	0.18	0.0	0.09	0.20	0.53	0.57
12	3.68	4.19	2.46	13.95	3.67	1.14	0.16	0.0	0.10	0.17	0.49	0.74
13	10.79	3.64	2.37	13.28	3.45	0.95	0.14	0.00	0.10	0.17	0.51	0.85
14	10.69	3.37	2.51	12.15	4.03	0.84	0.11	0.01	0.11	0.21	0.51	0.73
15	6.65	3.29	2.91	10.84	3.38	0.72	0.14	0.01	0.12	0.24	0.54	0.64
16	4.87	3.20	3.66	10.05	3.04	0.74	0.14	0.02	0.13	0.42	0.55	0.64
17	3.87	3.09	5.42	9.59	2.79	0.66	0.12	0.03	0.13	0.80	0.45	0.66
18	3.97	3.12	6.97	11.68	2.81	0.57	0.10	0.04	0.13	0.54	0.42	0.66
19	10.90	3.20	6.06	10.13	2.95	0.81	0.08	0.04	0.14	0.38	0.46	0.76
20	58.64	3.13	6.19	9.16	2.69	1.21	0.06	0.04	0.15	0.36	0.50	1.05
21	123.45	3.16	6.62	9.13	2.44	0.75	0.05	0.05	0.16	0.37	0.50	2.05
22	39.21	3.09	7.47	9.14	2.17	0.69	0.04	0.05	0.16	0.38	0.47	1.94
23	18.89	3.02	7.34	9.06	2.01	0.98	0.05	0.05	0.16	0.38	0.42	1.59
24	10.54	2.89	6.36	8.53	1.86	2.02	0.05	0.05	0.18	0.36	0.47	1.34
25	9.78	2.93	6.60	7.49	1.73	1.34	0.05	0.04	0.19	0.39	0.49	1.18
26	9.62	2.79	8.10	6.50	1.59	1.08	0.04	0.02	0.19	0.44	0.46	1.11
27	7.89	2.63	9.65	5.92	1.55	1.38	0.04	0.01	0.20	0.44	0.39	0.70
28	7.31	2.58	10.95	5.64	1.46	1.25	0.04	0.01	0.21	0.56	0.35	0.57
29	7.42		12.42	5.34	1.32	1.12	0.02	0.01	0.22	0.51	0.39	0.75
30	6.37		15.75	4.99	1.26	0.92	0.02	0.02	0.24	0.50	0.40	0.91
31	7.72		18.34		1.23		0.02	0.03		0.48		0.87
MEAN	12.481	4.185	5.753	11.050	2.938	1.118	0.206	0.020	0.124	0.332	0.488	0.861
INCHES	1.024	0.310	0.472	0.878	0.241	0.089	0.017	0.002	0.010	0.027	0.039	0.071
STA AV	0.684	0.378	0.295	0.402	0.304	0.147	0.026	0.056	0.025	0.036	0.059	0.089

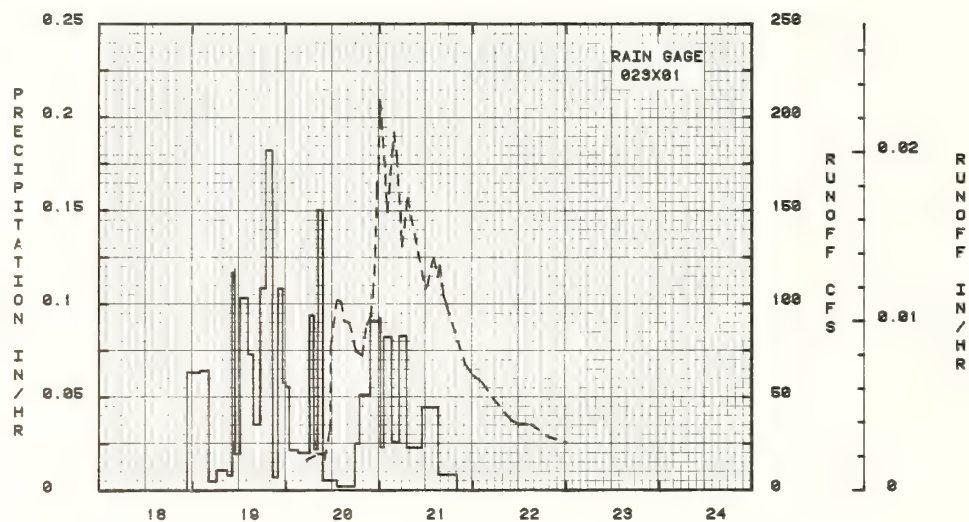
NOTES: To convert CFS to IN/DAY, multiply by. 0.002648. STA AV amounts are based on 1963-69 record period.

1969 SELECTED RUNOFF EVENT REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)												
ANTECEDENT CONDITIONS				RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JANUARY 18 - 22, 1969												
RG 023X01												
1-18	0.0		1-18	2235	0.0	0.0	1-20	508	16.420	0.0		
1-20		0.010	1-19	2400	0.0635	0.09		816	19.510	0.0062		
				154	0.0632	0.21		930	19.510	0.0089		
				414	0.0643	0.36		958	16.700	0.0098		
				614	0.0050	0.37		1122	32.920	0.0136		
WATERSHED CONDITIONS:												
Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted the low lying snow.												
				856	0.0111	0.40		1136	77.750	0.0150		
				1010	0.0081	0.41		1304	102.010	0.0295		
				1046	0.1166	0.48		1408	101.030	0.0414		
				1218	0.0196	0.51		1458	90.690	0.0502		
				1420	0.1033	0.72		1616	89.780	0.0631		
				1534	0.0730	0.81		1756	74.520	0.0782		
				1716	0.0353	0.87		1938	72.160	0.0920		
				1850	0.1085	1.04		2010	81.920	0.0965		
				2032	0.1824	1.35		2044	88.880	0.1018		
				2156	0.0071	1.36		2144	93.430	0.1119		
				2308	0.1083	1.49		2224	105.980	0.1192		
				2400	0.0577	1.54		2256	126.270	0.1260		
			1-20	54	0.0556	1.59		2320	160.660	0.1323		
				312	0.0217	1.64		2344	174.300	0.1397		
				610	0.0202	1.70		2400	199.240	0.1452		
				714	0.0938	1.80		12	208.580	0.1497		
				808	0.0222	1.82		204	149.000	0.1865		
				924	0.1500	2.01		316	181.410	0.2084		
				1309	0.0053	2.03		348	191.670	0.2194		
				1739	0.0022	2.04		428	178.540	0.2330		
				1851	0.0250	2.07		548	130.850	0.2558		
				2135	0.0512	2.21		712	156.710	0.2780		
				2400	0.0910	2.43		1148	108.010	0.3452		
			1-21	13	0.0924	2.45		1226	110.060	0.3528		
				105	0.0231	2.47		1340	122.910	0.3686		
				309	0.0823	2.64		1406	124.020	0.3745		
				505	0.0259	2.69		1502	114.240	0.3868		
				701	0.0828	2.85		1530	120.700	0.3928		
				1057	0.0229	2.94		1632	104.980	0.4057		
				1513	0.0445	3.13		1722	99.090	0.4151		

NOTES: To convert CFS to IN/HR, multiply by .0001103.

1969	SELECTED RUNOFF EVENT			REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Date	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF			JANUARY 18 - 22, 1969 (CONTINUED)							
			2001		0.0083	3.17	1-21	2204	67.590	0.4583
								2400	61.800	0.4721
							1-22	228	57.680	0.4884
								504	49.390	0.5038
								950	37.250	0.5266
								1136	35.280	0.5337
								1458	35.280	0.5468
								1856	28.940	0.5608
								2400	25.430	0.5760

NOTES: To convert CPS to IN/HR, multiply by .0001103.



EVENT OF JANUARY 18 - 22, 1969

REYNOLDS, IDAHO SALMON CREEK WATERSHED (046017)

REYNOLDS, IDAHO MACKS CREEK WATERSHED (046084)

LOCATION: Owyhee County, Idaho; 34 miles south of Hampa; east flowing tributary to Reynolds Creek, Snake River Basin.

AREA: 7846.00 acres 12.26 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										REYNOLDS, IDAHO MACKS CREEK WATERSHED (046084)									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	5.54	0.97	0.63	1.42	0.53	3.42	0.16	0.0	0.61	1.76	0.27	2.09	17.40					
	Q	1.240	0.239	0.488	0.773	0.123	0.040	0.015	0.003	0.002	0.003	0.004	0.011	2.940					
STA AV	P	3.23	1.56	0.69	1.18	0.93	1.83	0.12	1.69	0.44	1.32	1.31	1.83	16.13					
	Q	0.443	0.184	0.249	0.298	0.108	0.067	0.009	0.002	0.002	0.002	0.003	0.019	1.388					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge				Maximum Volume for Selected Time Interval													
		Date	Rate	1 Hour	2 Hours	6 Hours	12 Hours	1 Day	2 Days	8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.				
1969		1-21	0.039	1-21	0.037	1-20	0.069	1-20	0.183	1-20	0.294	1-20	0.457	1-20	0.649	1-19	0.969		
MAXIMUMS FOR PERIOD OF RECORD																			
		1-21	0.039	1-21	0.037	1-20	0.069	1-20	0.183	1-20	0.294	1-20	0.457	1-20	0.649	1-19	0.969		
		1969		1969		1969		1969		1969		1969		1969		1969			

NOTES: Watershed conditions: The watershed topography is steep, except in the lower valley, with numerous basalt outcrops at the higher elevations. 98% is sagebrush rangeland with a varying cover of sagebrush, bitterbrush, mountain mahogany and willow with a fair cover of forage plants such as cheatgrass, bluebunch wheatgrass, and Idaho fescue. 35% of area has a vegetative cover of 0-25%, 33% of the area has a vegetative cover of 26-50%, 18% of area has a vegetative cover of 51-75%, and 12% of the area has a vegetative cover of 76-100%. 2% of area is in pasture and haycrops which receives limited irrigation. For map of Watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, p. 68.3-4. Records began 1963. Precipitation: Thiessen weighted average 'Computed Actual' amounts from 12 rain gages. Station average precipitation amounts are based on 1968-69 record period. Station average streamflow amounts are based on 1963-69. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho; 50 miles N.E. of watershed.

1969					REYNOLDS, IDAHO MACKS CREEK WATERSHED (046084)								
DAILY PRECIPITATION (inches)													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.13	0.09	0.07	0.00	0.05	0.0	0.0	0.0	0.0	0.27	0.0	0.0	
2	0.01	0.01	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	
3	0.01	0.00	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	
4	0.04	0.0	0.00	0.0	0.0	0.01	0.0	0.0	0.0	0.00	0.0	0.02	
5	0.00	0.01	0.08	0.16	0.0	0.46	0.01	0.0	0.0	0.0	0.05	0.00	
6	0.0	0.08	0.11	0.67	0.0	0.03	0.01	0.0	0.0	0.0	0.09	0.0	
7	0.23	0.00	0.02	0.02	0.0	0.04	0.0	0.0	0.0	0.0	0.01	0.0	
8	0.02	0.00	0.17	0.0	0.0	0.29	0.0	0.0	0.0	0.16	0.0	0.22	
9	0.0	0.07	0.01	0.0	0.0	0.08	0.0	0.0	0.28	0.01	0.0	0.02	
10	0.01	0.04	0.01	0.0	0.0	0.22	0.0	0.0	0.00	0.19	0.0	0.03	
11	0.20	0.01	0.0	0.0	0.0	0.13	0.0	0.0	0.00	0.00	0.00	0.05	
12	0.47	0.23	0.0	0.0	0.11	0.00	0.0	0.0	0.0	0.00	0.0	0.06	
13	0.27	0.0	0.0	0.0	0.14	0.00	0.0	0.0	0.0	0.0	0.0	0.01	
14	0.00	0.01	0.0	0.02	0.14	0.00	0.0	0.0	0.0	0.0	0.02	0.01	
15	0.09	0.16	0.0	0.03	0.00	0.0	0.0	0.0	0.0	0.05	0.08	0.0	
16	0.00	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.03	0.00	
17	0.01	0.00	0.04	0.04	0.0	0.0	0.00	0.0	0.0	0.47	0.0	0.0	
18	0.04	0.00	0.03	0.31	0.01	0.0	0.00	0.0	0.01	0.0	0.0	0.0	
19	1.10	0.0	0.0	0.00	0.07	0.56	0.0	0.0	0.07	0.00	0.0	0.33	
20	0.88	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.20	
21	0.68	0.04	0.0	0.0	0.0	0.04	0.0	0.0	0.00	0.0	0.0	0.77	
22	0.11	0.01	0.00	0.01	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.02	
23	0.05	0.02	0.00	0.08	0.0	0.49	0.0	0.0	0.00	0.0	0.0	0.14	
24	0.00	0.13	0.0	0.06	0.0	0.50	0.11	0.0	0.0	0.0	0.0	0.0	
25	0.38	0.00	0.0	0.02	0.0	0.11	0.02	0.0	0.0	0.0	0.0	0.13	
26	0.30	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	
27	0.18	0.0	0.0	0.0	0.0	0.25	0.00	0.0	0.0	0.07	0.0	0.00	
28	0.17	0.00	0.0	0.0	0.0	0.12	0.00	0.0	0.0	0.12	0.0	0.0	
29	0.03	0.01	0.00	0.0	0.0	0.03	0.00	0.0	0.0	0.00	0.0	0.0	
30	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	
31	0.11	0.0			0.0		0.0	0.0		0.0		0.0	
TOTAL	5.54	0.97	0.63	1.42	0.53	3.42	0.16	0.0	0.61	1.76	0.27	2.09	
STA AV	3.23	1.56	0.69	1.18	0.93	1.83	0.12	1.69	0.44	1.32	1.31	1.83	

NOTES: Values are Thiessen weighted average 'Actual' amounts from 12 recording pairs of gages (shielded and unshielded). 'Actual' amounts were computed as per relationship developed by W. R. Hamon, "Computing Actual Precipitation", Proceedings of WHO-IDHS Symposium, Geilo, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) \times 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period. For temperature information, see table of daily maximum and minimum values included for Watershed 68.001.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO HACKS CREEK WATERSHED (046084)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.05	0.03	0.06	0.00	0.03	0.0	0.0	0.0	0.0	0.26	0.0	0.0
2	0.01	0.01	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
3	0.01	0.00	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
4	0.01	0.0	0.00	0.0	0.0	0.01	0.0	0.0	0.0	0.00	0.0	0.01
5	0.00	0.00	0.05	0.05	0.0	0.46	0.01	0.0	0.0	0.0	0.05	0.00
6	0.0	0.06	0.06	0.26	0.0	0.03	0.00	0.0	0.0	0.0	0.08	0.0
7	0.10	0.00	0.01	0.01	0.0	0.04	0.0	0.0	0.0	0.0	0.01	0.0
8	0.02	0.00	0.10	0.0	0.0	0.28	0.0	0.0	0.0	0.13	0.0	0.15
9	0.0	0.05	0.01	0.0	0.0	0.07	0.0	0.0	0.26	0.01	0.0	0.01
10	0.01	0.03	0.01	0.0	0.0	0.15	0.0	0.0	0.00	0.12	0.0	0.02
11	0.17	0.01	0.0	0.0	0.0	0.08	0.0	0.0	0.00	0.00	0.00	0.04
12	0.41	0.17	0.0	0.0	0.10	0.00	0.0	0.0	0.0	0.00	0.0	0.05
13	0.24	0.0	0.0	0.0	0.13	0.00	0.0	0.0	0.0	0.0	0.0	0.01
14	0.00	0.00	0.0	0.01	0.13	0.00	0.0	0.0	0.0	0.0	0.01	0.01
15	0.08	0.11	0.0	0.01	0.00	0.0	0.0	0.0	0.0	0.03	0.07	0.0
16	0.00	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.02	0.00
17	0.01	0.00	0.03	0.03	0.0	0.0	0.00	0.0	0.0	0.35	0.0	0.0
18	0.04	0.00	0.02	0.20	0.01	0.0	0.00	0.0	0.01	0.0	0.0	0.0
19	1.00	0.0	0.0	0.00	0.06	0.43	0.0	0.0	0.06	0.00	0.0	0.29
20	0.79	0.00	0.0	0.0	0.0	0.01	0.0	0.0	0.24	0.0	0.0	0.18
21	0.61	0.04	0.0	0.0	0.0	0.03	0.0	0.0	0.00	0.0	0.0	0.65
22	0.10	0.01	0.00	0.00	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.02
23	0.03	0.02	0.00	0.04	0.0	0.35	0.0	0.0	0.00	0.0	0.0	0.11
24	0.00	0.11	0.0	0.04	0.0	0.37	0.10	0.0	0.0	0.0	0.0	0.0
25	0.17	0.00	0.0	0.01	0.0	0.07	0.02	0.0	0.0	0.0	0.0	0.08
26	0.13	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.04
27	0.07	0.0	0.0	0.0	0.0	0.24	0.00	0.0	0.0	0.06	0.0	0.00
28	0.06	0.00	0.0	0.0	0.0	0.12	0.00	0.0	0.0	0.10	0.0	0.0
29	0.01	0.0	0.01	0.00	0.0	0.03	0.00	0.0	0.0	0.00	0.0	0.0
30	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00
31	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.17	0.72	0.41	0.66	0.46	2.82	0.14	0.0	0.58	1.37	0.25	1.68
STA AV												

NOTES: Values are Thiessen weighted average amounts from 12 unshielded recording gages. STA AV do not apply to unshielded rain gage records.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO HACKS CREEK WATERSHED (046084)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.08	0.06	0.06	0.00	0.04	0.0	0.0	0.0	0.0	0.27	0.0	0.0
2	0.01	0.01	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
3	0.01	0.00	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
4	0.02	0.0	0.00	0.0	0.0	0.01	0.0	0.0	0.0	0.00	0.0	0.02
5	0.00	0.00	0.07	0.10	0.0	0.46	0.01	0.0	0.0	0.0	0.05	0.00
6	0.0	0.07	0.08	0.43	0.0	0.03	0.00	0.0	0.0	0.0	0.09	0.0
7	0.14	0.00	0.02	0.01	0.0	0.04	0.0	0.0	0.0	0.0	0.01	0.0
8	0.02	0.00	0.14	0.0	0.0	0.28	0.0	0.0	0.0	0.15	0.0	0.18
9	0.0	0.06	0.01	0.0	0.0	0.08	0.0	0.0	0.27	0.01	0.0	0.02
10	0.01	0.04	0.01	0.0	0.0	0.18	0.0	0.0	0.00	0.15	0.0	0.02
11	0.19	0.01	0.0	0.0	0.0	0.10	0.0	0.0	0.00	0.00	0.00	0.05
12	0.45	0.20	0.0	0.0	0.10	0.00	0.0	0.0	0.0	0.00	0.0	0.06
13	0.25	0.0	0.0	0.0	0.14	0.00	0.0	0.0	0.0	0.0	0.0	0.01
14	0.00	0.01	0.0	0.01	0.14	0.00	0.0	0.0	0.0	0.0	0.01	0.01
15	0.09	0.14	0.0	0.02	0.00	0.0	0.0	0.0	0.0	0.04	0.07	0.0
16	0.00	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.03	0.00
17	0.01	0.00	0.03	0.03	0.0	0.0	0.00	0.0	0.0	0.40	0.0	0.0
18	0.04	0.00	0.03	0.25	0.01	0.0	0.00	0.0	0.01	0.0	0.0	0.0
19	1.06	0.0	0.0	0.00	0.07	0.49	0.0	0.0	0.06	0.00	0.0	0.31
20	0.84	0.00	0.0	0.0	0.0	0.01	0.0	0.0	0.24	0.0	0.0	0.19
21	0.65	0.04	0.0	0.0	0.0	0.03	0.0	0.0	0.00	0.0	0.0	0.71
22	0.11	0.01	0.00	0.01	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.02
23	0.04	0.02	0.00	0.06	0.0	0.41	0.0	0.0	0.00	0.0	0.0	0.12
24	0.00	0.12	0.0	0.05	0.0	0.42	0.11	0.0	0.0	0.0	0.0	0.0
25	0.26	0.00	0.0	0.01	0.0	0.09	0.02	0.0	0.0	0.0	0.0	0.10
26	0.20	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.05
27	0.12	0.0	0.0	0.0	0.0	0.24	0.00	0.0	0.0	0.07	0.0	0.00
28	0.11	0.00	0.0	0.0	0.0	0.12	0.00	0.0	0.0	0.11	0.0	0.0
29	0.02	0.0	0.01	0.00	0.0	0.03	0.00	0.0	0.0	0.00	0.0	0.0
30	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00
31	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.85	0.85	0.52	1.00	0.50	3.09	0.15	0.0	0.60	1.55	0.26	1.88
STA AV												

NOTES: Values are Thiessen weighted average amounts from 12 shielded recording gages. STA AV do not apply to shielded rain gage records.

1969 MEAN DAILY DISCHARGE (cfs) REYNOLDS, IDAHO HACKS CREEK WATERSHED (046084)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.22	4.82	1.99	12.91	3.29	0.42	0.36	0.06	0.02	0.03	0.04	0.05
2	0.68	4.25	1.94	11.52	3.08	0.39	0.31	0.06	0.02	0.03	0.04	0.05
3	0.38	3.69	1.92	9.60	2.94	0.37	0.28	0.05	0.02	0.03	0.05	0.05
4	0.50	3.37	1.88	8.56	2.58	0.34	0.28	0.05	0.02	0.04	0.03	0.06
5	2.52	3.21	2.00	9.08	2.41	0.41	0.27	0.06	0.02	0.04	0.02	0.06
6	1.79	2.97	2.06	11.06	2.19	0.53	0.27	0.04	0.02	0.04	0.02	0.06
7	0.99	2.75	1.99	9.50	1.76	0.49	0.25	0.03	0.02	0.03	0.03	0.07
8	0.35	2.61	2.04	11.71	0.94	0.62	0.17	0.03	0.02	0.03	0.03	0.07
9	0.50	2.64	1.85	17.90	0.88	0.54	0.15	0.03	0.02	0.04	0.03	0.07
10	1.01	2.77	1.78	15.34	0.97	0.53	0.15	0.03	0.02	0.04	0.04	0.08
11	1.23	2.83	1.81	12.41	1.03	0.52	0.15	0.03	0.02	0.04	0.04	0.07
12	2.97	4.03	1.86	12.04	1.05	0.40	0.15	0.03	0.02	0.04	0.04	0.07
13	20.01	3.01	1.81	10.90	1.26	0.38	0.15	0.03	0.02	0.05	0.04	0.07
14	13.52	2.78	1.80	10.34	1.69	0.35	0.14	0.03	0.02	0.06	0.05	0.07
15	5.53	2.66	2.26	8.70	1.50	0.32	0.14	0.02	0.02	0.06	0.05	0.07
16	3.76	2.76	3.05	8.04	1.20	0.34	0.13	0.02	0.02	0.07	0.05	0.07
17	2.29	2.58	8.63	7.36	1.13	0.30	0.14	0.02	0.02	0.06	0.05	0.07
18	2.61	2.51	7.53	8.99	1.09	0.30	0.14	0.02	0.02	0.02	0.05	0.07
19	21.42	2.44	4.89	6.94	1.27	0.40	0.12	0.02	0.02	0.02	0.05	0.08
20	76.46	2.42	5.61	6.04	1.33	0.49	0.11	0.02	0.03	0.02	0.06	0.15
21	132.77	2.34	6.78	5.99	0.99	0.32	0.12	0.02	0.03	0.02	0.07	0.45
22	31.37	2.34	9.34	5.88	0.91	0.31	0.12	0.02	0.04	0.02	0.07	0.35
23	15.90	2.27	7.18	5.35	0.73	0.39	0.12	0.02	0.03	0.02	0.07	0.29
24	12.48	2.22	5.38	4.40	0.70	0.54	0.11	0.02	0.03	0.02	0.07	0.20
25	12.14	2.24	6.80	4.66	0.70	0.55	0.13	0.02	0.03	0.03	0.06	0.16
26	14.74	2.11	8.87	4.39	0.56	0.51	0.12	0.02	0.04	0.03	0.05	0.15
27	9.04	2.02	7.34	3.94	0.51	0.60	0.12	0.02	0.04	0.03	0.05	0.12
28	7.27	2.00	8.89	4.27	0.49	0.50	0.11	0.02	0.05	0.04	0.05	0.10
29	4.71		11.46	3.76	0.47	0.45	0.09	0.02	0.06	0.04	0.05	0.10
30	5.08		14.18	3.26	0.47	0.42	0.06	0.02	0.04	0.04	0.05	0.11
31	4.43		15.78		0.47		0.06	0.02		0.04		0.11
MEAN	13.182	2.809	5.184	8.494	1.309	0.435	0.162	0.030	0.025	0.036	0.046	0.114
INCHES	1.240	0.239	0.488	0.773	0.123	0.040	0.015	0.003	0.002	0.003	0.004	0.011
STA 1V	0.443	0.188	0.249	0.298	0.108	0.067	0.009	0.002	0.002	0.002	0.003	0.019

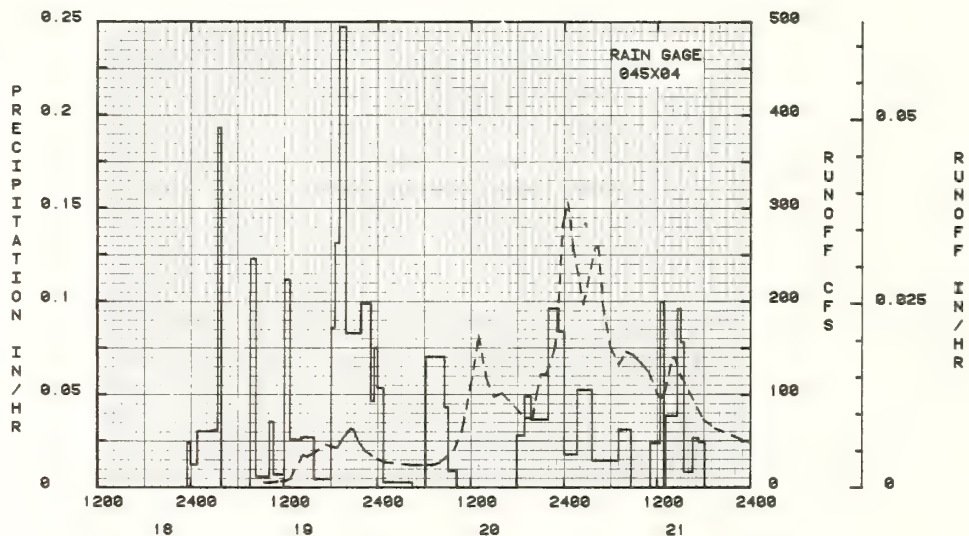
NOTES: To convert CFS to IN/DAY, multiply by 0.003034. STA 1V amounts based on 1963-69 record period.

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO HACKS CREEK WATERSHED (046084)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 18 - 21, 1969										
RG 045104			RG 045104							
1-18	0.0		1-18	2335	0.0	0.0	1-19	924	5.510	0.0
1-19		0.004		2400	0.0240	0.01		1000	5.390	0.0004
			1-19	49	0.0122	0.02		1138	6.870	0.0017
				248	0.0303	0.08		1210	7.020	0.0022
				327	0.0308	0.10		1250	9.670	0.0029
WATERSHED CONDITIONS:				355	0.1929	0.19		1408	30.100	0.0062
Runoff event followed an				739	0.0	0.19		1426	34.900	0.0074
earlier event on 1/13/69				823	0.1227	0.28		1456	32.930	0.0095
which primed the system.				1007	0.0058	0.29		1528	35.410	0.0118
The event was the result				1041	0.0353	0.31		1724	45.970	0.0217
of a heavy rain that melted										
the low lying snow.				1205	0.0071	0.32		1800	44.180	0.0251
				1248	0.1116	0.40		1842	42.430	0.0289
				1421	0.0258	0.44		1908	45.970	0.0313
				1550	0.0270	0.48		1936	53.610	0.0342
				1804	0.0045	0.49		2008	59.160	0.0380
				1832	0.0857	0.53		2034	63.550	0.0414
				1904	0.1312	0.60		2104	60.600	0.0453
				1955	0.2471	0.81		2138	47.810	0.0492
				2151	0.0828	0.97		2222	39.630	0.0533
				2310	0.0987	1.10		2400	30.560	0.0605
				2336	0.0462	1.12	1-20	50	27.020	0.0635
				2400	0.0750	1.15		432	24.160	0.0755
			1-20	45	0.0533	1.19		620	24.160	0.0810
				430	0.0027	1.20		722	24.560	0.0842
				614	0.0	1.20		802	27.020	0.0864
				839	0.0703	1.37		958	41.300	0.0947
				907	0.0429	1.39		1100	65.070	0.1016
				1015	0.0088	1.40		1158	107.890	0.1122
				1751	0.0	1.40		1302	163.450	0.1305
				1855	0.0281	1.43		1358	117.790	0.1471
				1944	0.0490	1.47		1458	97.550	0.1607
				2156	0.0364	1.55		1600	101.600	0.1737
				2317	0.0963	1.68		1856	74.650	0.2064
				2400	0.0837	1.74		1958	74.650	0.2162
			1-21	141	0.0178	1.77		2026	99.570	0.2213

NOTES: To convert CFS to IN/HR, multiply by .00012640.

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO BACKS CREEK WATERSHED (046084)						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF JANUARY 18 - 21, 1969 (CONTINUED)									
1-21			335		0.0526	1.87	1-20	2058	121.220
			701		0.0146	1.92		2142	122.380
			837		0.0313	1.97		2246	148.430
			1107		0.0	1.97		2310	179.440
			1222		0.0240	2.00		2346	281.220
			1252		0.1000	2.05		2400	289.320
			1303		0.0	2.05	1-21	26	306.700
			1436		0.0387	2.11		108	257.640
			1501		0.0960	2.15		200	219.600
			1524		0.0783	2.18		226	196.450
			1634		0.0086	2.19		358	257.640
			1719		0.0267	2.21		424	259.550
			1808		0.0245	2.23		458	196.450
								558	151.090
								700	131.910
								800	145.810
								856	141.930
								956	133.140
								1056	123.540
								1158	101.600
								1226	95.570
								1258	102.630
								1358	139.380
								1412	140.650
								1458	121.220
								1758	72.990
								1924	63.550
								2400	47.810

NOTES: To convert CFS to IN/HR, multiply by .00012640.



EVENT OF JANUARY 18 - 21, 1969
REYNOLDS, IDAHO BACKS CREEK WATERSHED (046084)

REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)

LOCATION: Owyhee County, Idaho; 40 miles south ofampa; main stem of Reynolds Creek which is tributary to the Snake River.

AREA: 13453.00 acres 21.02 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)										REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	9.04	1.87	0.78	1.47	0.50	2.87	0.34	0.01	0.37	1.80	0.54	3.69	23.28					
	Q	1.452	0.388	0.681	3.327	3.870	1.165	0.201	0.012	0.013	0.054	0.070	0.101	11.334					
STA AV	P	5.44	2.70	0.97	1.46	0.92	1.89	0.27	2.32	0.38	1.52	2.44	3.82	24.13					
	Q	0.653	0.489	0.566	1.526	2.812	1.422	0.204	0.039	0.020	0.057	0.108	0.130	8.026					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
	Maximum Discharge Date	1 Hour Date Vol.		2 Hours Date Vol.		6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.		8 Days Date Vol.					
1969	1-21	0.030	1-21	0.029	1-21	0.057	1-21	0.157	1-21	0.283	1-20	0.454	1-20	0.612	5- 8 1.380				
MAXIMUMS FOR PERIOD OF RECORD																			
	1-21 1969	0.030	1-21 1969	0.029	1-21 1969	0.057	1-21 1969	0.157	1-21 1969	0.283	1-20 1969	0.454	1-20 1969	0.612	5-17 1967 1.523				

NOTES: Watershed condition - Watershed is generally sagebrush rangeland except for scattered stands of Douglas fir and aspen and mountain meadows. The topography is steep with numerous rock outcrops on the ridges. The watershed is used mainly for cattle grazing except during the winter when snow blankets most of the area. Vegetation consists predominately of big sagebrush, little sagebrush, rabbitbrush, snowberry, blue bunch wheatgrass, Idaho fescue, and squirreltail grass. 25% of the area has a vegetative cover of 0-25%, 15% of the area has a vegetative cover of 26-50%, 15% of the area has a vegetative cover of 51-75%, and 45% of the area has a vegetative cover of 76-100%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 68.4-6. Records began: Precipitation - 1963; Runoff - 1967. Precipitation: Thiessen weighted average 'Computed Actual' amounts from 16 rain gages. Station average precipitation amounts are based on 1968-69 record period. Station average runoff amounts are based on 1967-69 record period. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho; 50 miles N.E. of watershed.

SNOW COURSE DATA: DATE OF MEASUREMENT/AVERAGE WATER CONTENT (INCHES)												
Course#	Date	Inches	Date	Inches	Date	Inches	Date	Inches	Date	Inches	Date	Inches
144062	010269	6.20	011669	7.70	013069	13.00	021469	15.80	022869	16.90	031469	17.70
144062	032769	17.20	041069	12.80	042469	3.40	121569	1.02				
155054	010269	5.52	011669	6.54	021469	13.50	022869	15.10	031469	15.00	032769	14.10
155054	041069	8.50	121569	1.20								
163020	010269	12.34	011669	15.40	013069	25.80	021469	28.00	022869	31.00	031469	31.60
163020	032769	32.10	041069	32.60	042469	30.50	050869	26.90	052269	12.90	120169	2.82
163020	121569	17.68										
163098	010269	11.04	011669	14.30	013069	27.00	021469	28.80	022869	31.70	031469	32.00
163098	032769	31.90	042469	26.90	050869	19.10	120169	1.65	121569	14.66		
167007	010269	5.40	011669	7.00	013069	12.60	021469	13.50	031369	16.20	032869	14.90
167007	041069	12.80	042569	7.20	121669	1.43						
174026	010269	10.60	011669	14.60	013069	25.40	021469	29.00	022869	31.20	031469	31.00
174026	032769	31.20	041069	30.80	042469	25.40	050869	16.60	120169	1.00	121569	2.74

NOTES: For snow course location information, see map on p. 68.001-6 of Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1968, USDA Misc. Pub. 1330.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.06	0.24	0.06	0.0	0.02	0.0	0.0	0.00	0.0	0.23	0.0	0.0
2	0.02	0.08	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.00	0.0
3	0.02	0.01	0.05	0.0	0.0	0.0	0.0	0.00	0.0	0.01	0.0	0.00
4	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.04
5	0.00	0.09	0.14	0.05	0.0	0.00	0.01	0.0	0.0	0.0	0.13	0.0
6	0.0	0.09	0.09	0.99	0.0	0.26	0.01	0.0	0.0	0.0	0.20	0.00
7	0.25	0.00	0.04	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.01	0.00
8	0.0	0.01	0.04	0.0	0.0	0.19	0.0	0.00	0.00	0.20	0.0	0.16
9	0.00	0.16	0.04	0.0	0.0	0.10	0.0	0.00	0.16	0.02	0.0	0.04
10	0.0	0.03	0.03	0.0	0.0	0.54	0.0	0.00	0.02	0.22	0.0	0.15
11	0.53	0.01	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.35
12	0.69	0.20	0.0	0.00	0.14	0.03	0.0	0.0	0.00	0.00	0.0	0.22
13	0.40	0.00	0.0	0.0	0.11	0.0	0.0	0.0	0.00	0.00	0.0	0.05
14	0.01	0.05	0.0	0.0	0.19	0.0	0.01	0.0	0.0	0.0	0.0	0.00
15	0.16	0.26	0.0	0.00	0.01	0.00	0.00	0.0	0.0	0.02	0.12	0.0
16	0.00	0.05	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.23	0.06	0.00
17	0.0	0.01	0.12	0.04	0.0	0.0	0.0	0.0	0.00	0.29	0.01	0.00
18	0.14	0.00	0.10	0.19	0.02	0.00	0.0	0.0	0.01	0.01	0.00	0.0
19	1.87	0.0	0.0	0.01	0.03	0.31	0.0	0.0	0.01	0.00	0.0	0.63
20	1.37	0.00	0.0	0.00	0.0	0.01	0.0	0.0	0.08	0.00	0.0	0.34
21	1.23	0.14	0.00	0.0	0.0	0.02	0.0	0.0	0.06	0.0	0.0	0.69
22	0.18	0.05	0.0	0.01	0.0	0.05	0.0	0.0	0.01	0.0	0.0	0.13
23	0.01	0.13	0.00	0.07	0.0	0.59	0.0	0.0	0.0	0.0	0.0	0.38
24	0.01	0.17	0.0	0.08	0.0	0.20	0.19	0.0	0.0	0.0	0.0	0.02
25	0.50	0.06	0.0	0.01	0.0	0.23	0.12	0.0	0.0	0.0	0.0	0.10
26	0.40	0.01	0.0	0.0	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.36
27	0.23	0.01	0.0	0.0	0.0	0.19	0.00	0.0	0.0	0.09	0.00	0.01
28	0.39	0.00	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.20	0.0	0.00
29	0.13	0.0	0.0	0.00	0.0	0.00	0.00	0.0	0.00	0.00	0.0	0.00
30	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
31	0.19	0.05	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
TOTAL	9.04	1.87	0.78	1.47	0.50	2.87	0.34	0.01	0.37	1.80	0.54	3.69
STA AV	5.44	2.70	0.97	1.46	0.92	1.89	0.27	2.32	0.38	1.52	2.44	3.82

NOTES: Values are Thiessen weighted average 'actual' amounts from 15 recording pairs of gages (shielded and unshielded). 'Actual' amounts were computed as per relationship developed by W. R. Hamon, "Computing Actual Precipitation", Proceedings of WMO-IDHS Symposium, Gellio, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) + 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period. For temperature information, see table of daily maximum and minimum values included for Watersheds 68.001 and 68.014.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.03	0.13	0.03	0.0	0.01	0.0	0.0	0.00	0.0	0.22	0.0	0.0
2	0.01	0.04	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.00	0.0
3	0.01	0.01	0.02	0.0	0.0	0.0	0.0	0.00	0.0	0.01	0.0	0.00
4	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.02
5	0.00	0.05	0.07	0.02	0.0	0.00	0.01	0.0	0.0	0.0	0.09	0.0
6	0.0	0.05	0.05	0.40	0.0	0.24	0.01	0.0	0.0	0.0	0.14	0.00
7	0.15	0.00	0.02	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.00	0.00
8	0.0	0.00	0.02	0.0	0.0	0.17	0.0	0.00	0.00	0.16	0.0	0.09
9	0.00	0.07	0.02	0.0	0.0	0.09	0.0	0.00	0.14	0.02	0.0	0.02
10	0.0	0.01	0.01	0.0	0.0	0.50	0.0	0.00	0.02	0.17	0.0	0.09
11	0.29	0.00	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.19
12	0.45	0.10	0.0	0.00	0.13	0.02	0.0	0.0	0.00	0.00	0.0	0.12
13	0.30	0.00	0.0	0.0	0.10	0.0	0.0	0.0	0.00	0.00	0.0	0.03
14	0.00	0.02	0.0	0.0	0.18	0.0	0.01	0.0	0.0	0.0	0.0	0.00
15	0.10	0.13	0.0	0.00	0.01	0.00	0.00	0.0	0.0	0.02	0.09	0.0
16	0.00	0.02	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.18	0.05	0.00
17	0.0	0.00	0.09	0.02	0.0	0.0	0.0	0.0	0.00	0.23	0.01	0.00
18	0.09	0.00	0.08	0.13	0.02	0.00	0.0	0.0	0.01	0.01	0.00	0.0
19	1.26	0.0	0.0	0.01	0.03	0.28	0.0	0.0	0.01	0.00	0.0	0.48
20	0.99	0.00	0.0	0.00	0.0	0.01	0.0	0.0	0.06	0.00	0.0	0.26
21	0.92	0.06	0.00	0.0	0.0	0.02	0.0	0.0	0.05	0.0	0.0	0.54
22	0.12	0.02	0.0	0.01	0.0	0.04	0.0	0.0	0.01	0.0	0.0	0.10
23	0.01	0.05	0.00	0.05	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.29
24	0.00	0.09	0.0	0.06	0.0	0.18	0.18	0.0	0.0	0.0	0.0	0.01
25	0.25	0.03	0.0	0.01	0.0	0.20	0.11	0.0	0.0	0.0	0.0	0.06
26	0.19	0.01	0.0	0.0	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.22
27	0.10	0.01	0.0	0.0	0.0	0.16	0.00	0.0	0.0	0.07	0.00	0.01
28	0.18	0.00	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.14	0.0	0.00
29	0.05	0.0	0.0	0.00	0.0	0.00	0.00	0.0	0.00	0.00	0.0	0.00
30	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
31	0.09	0.03	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
TOTAL	5.74	0.92	0.46	0.73	0.48	2.54	0.33	0.01	0.30	1.48	0.38	2.53
STA AV												

NOTES: Values are Thiessen weighted average amounts from 16 unshielded recording gages. STA AV do not apply to unshielded rain gage records.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.04	0.18	0.04	0.0	0.01	0.0	0.0	0.00	0.0	0.23	0.0	0.0
2	0.01	0.06	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.00	0.0
3	0.02	0.01	0.03	0.0	0.0	0.0	0.0	0.00	0.0	0.01	0.0	0.00
4	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.00	0.03
5	0.00	0.07	0.10	0.03	0.0	0.00	0.01	0.0	0.0	0.0	0.11	0.0
6	0.0	0.07	0.07	0.65	0.0	0.25	0.01	0.0	0.0	0.0	0.17	0.00
7	0.20	0.00	0.03	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.00	0.00
8	0.0	0.00	0.03	0.0	0.0	0.18	0.0	0.00	0.00	0.18	0.0	0.12
9	0.00	0.11	0.03	0.0	0.0	0.10	0.0	0.00	0.15	0.02	0.0	0.03
10	0.0	0.02	0.02	0.0	0.0	0.52	0.0	0.00	0.02	0.19	0.0	0.12
11	0.41	0.00	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.26
12	0.56	0.15	0.0	0.00	0.14	0.03	0.0	0.0	0.00	0.00	0.0	0.17
13	0.35	0.00	0.0	0.0	0.10	0.0	0.0	0.0	0.00	0.00	0.0	0.04
14	0.01	0.03	0.0	0.0	0.18	0.0	0.01	0.0	0.0	0.0	0.0	0.00
15	0.13	0.19	0.0	0.00	0.01	0.00	0.00	0.0	0.0	0.02	0.11	0.0
16	0.00	0.03	0.01	0.0	0.00	0.0	0.0	0.0	0.0	0.21	0.06	0.00
17	0.0	0.01	0.10	0.03	0.0	0.0	0.0	0.0	0.00	0.26	0.01	0.00
18	0.12	0.00	0.09	0.16	0.02	0.00	0.0	0.0	0.01	0.01	0.00	0.0
19	1.56	0.0	0.0	0.01	0.03	0.30	0.0	0.0	0.01	0.00	0.0	0.55
20	1.18	0.00	0.0	0.00	0.0	0.01	0.0	0.0	0.07	0.00	0.0	0.30
21	1.08	0.10	0.00	0.0	0.0	0.02	0.0	0.0	0.06	0.0	0.0	0.62
22	0.15	0.03	0.0	0.01	0.0	0.04	0.0	0.0	0.01	0.0	0.0	0.11
23	0.01	0.09	0.00	0.06	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.33
24	0.00	0.13	0.0	0.07	0.0	0.19	0.18	0.0	0.0	0.0	0.0	0.02
25	0.37	0.04	0.0	0.01	0.0	0.21	0.12	0.0	0.0	0.0	0.0	0.07
26	0.29	0.01	0.0	0.0	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.29
27	0.16	0.01	0.0	0.0	0.0	0.18	0.00	0.0	0.0	0.08	0.00	0.01
28	0.27	0.00	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.17	0.0	0.00
29	0.09	0.0	0.0	0.00	0.0	0.00	0.00	0.0	0.00	0.00	0.0	0.00
30	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
31	0.13	0.04	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
TOTAL	7.33	1.36	0.62	1.05	0.49	2.72	0.34	0.01	0.33	1.65	0.46	3.08
STA AV												

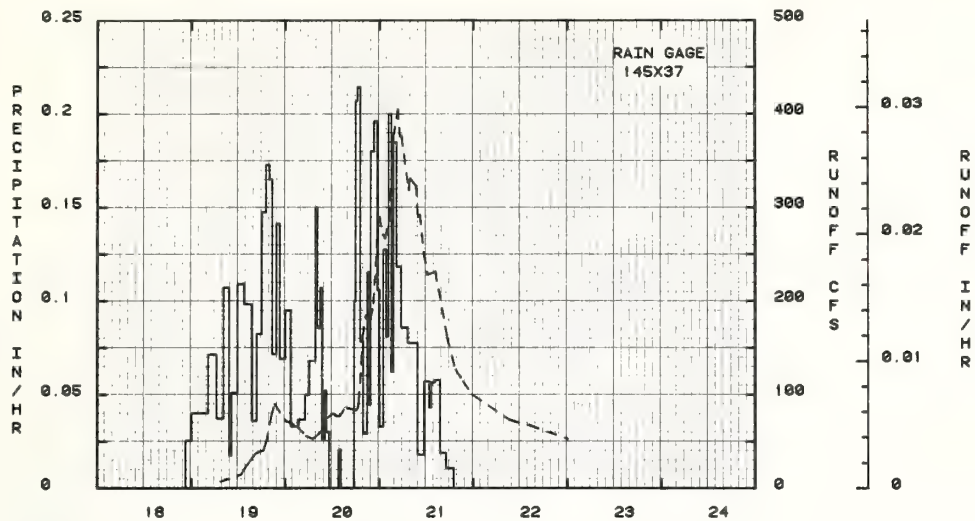
NOTES: Values are Thiessen weighted average amounts from 16 shielded recording gages. STA AV do not apply to shielded rain gage records.

1969	MEAN DAILY DISCHARGE (cfs)					REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.66	11.57	5.48	59.40	56.21	37.89	8.03	0.95	0.24	0.47	1.42	0.95
2	2.59	10.56	5.37	59.34	50.99	34.27	7.09	0.77	0.30	0.42	1.42	0.93
3	2.57	9.78	5.42	52.29	48.34	32.36	6.77	0.67	0.30	0.42	1.39	0.99
4	3.29	9.22	5.37	57.90	52.19	32.06	6.49	0.59	0.19	0.44	1.34	0.91
5	8.41	9.15	5.40	68.05	61.54	31.46	6.34	0.44	0.16	0.45	1.38	0.95
6	11.14	9.29	5.34	64.60	68.05	33.88	6.38	0.34	0.13	0.45	1.83	0.93
7	7.68	8.90	5.43	51.49	77.16	31.34	5.81	0.27	0.18	0.45	1.79	0.99
8	4.77	8.52	5.31	49.39	86.01	31.49	5.26	0.22	0.23	0.48	1.69	1.10
9	5.01	8.59	5.31	52.91	94.42	30.72	4.70	0.19	0.27	0.59	1.59	1.10
10	4.73	8.56	5.31	51.75	98.43	34.40	4.41	0.13	0.27	0.73	1.49	1.17
11	4.55	8.31	5.31	52.63	97.60	32.53	4.06	0.12	0.21	0.87	1.42	1.39
12	15.09	8.76	5.37	60.20	96.66	26.00	3.71	0.10	0.21	0.95	1.39	1.54
13	31.22	8.05	5.37	61.99	102.58	23.30	3.54	0.08	0.27	0.97	1.42	1.66
14	20.27	8.44	5.11	55.45	114.71	20.76	3.39	0.07	0.27	0.97	1.42	1.66
15	11.21	7.63	5.33	50.81	99.53	18.54	3.20	0.03	0.26	0.97	1.44	1.54
16	10.46	7.18	5.72	53.65	88.74	17.08	3.00	0.02	0.22	0.99	1.62	1.45
17	8.97	7.01	7.63	61.35	83.99	15.54	2.89	0.02	0.26	1.03	1.21	1.35
18	6.52	6.70	8.19	66.23	83.85	14.35	2.84	0.02	0.32	1.08	1.16	1.32
19	28.93	6.74	7.16	62.87	76.76	14.30	2.54	0.02	0.26	1.14	1.25	2.41
20	96.81	6.48	7.34	67.77	66.70	14.41	2.33	0.03	0.19	1.23	1.28	3.89
21	239.76	6.40	8.12	78.75	62.14	12.46	2.21	0.05	0.18	1.32	1.36	6.91
22	71.88	6.28	9.85	91.42	59.53	12.18	2.06	0.09	0.14	1.37	1.20	4.20
23	44.54	6.28	10.06	94.25	58.29	15.30	1.96	0.13	0.09	1.35	1.09	2.84
24	34.42	6.39	8.79	80.76	58.40	19.43	1.97	0.20	0.09	1.34	1.19	2.19
25	30.72	6.31	10.51	68.33	57.67	15.10	2.65	0.20	0.12	1.28	1.21	1.91
26	28.46	6.28	17.51	61.60	56.19	13.05	2.06	0.19	0.17	1.28	1.10	1.82
27	21.95	6.40	23.48	59.47	53.13	12.90	1.84	0.26	0.32	1.26	0.89	1.92
28	18.89	5.76	30.32	64.61	48.24	11.77	1.66	0.21	0.47	1.48	0.82	1.87
29	15.77	38.34	63.57	63.57	44.56	10.39	1.55	0.17	0.50	1.56	0.88	1.92
30	14.35	51.12	57.81	43.54	43.54	9.10	1.40	0.17	0.52	1.47	0.94	1.76
31	13.01	60.71		41.13			1.17	0.20		1.44		1.74
MEAN	26.471	7.841	12.423	62.687	70.556	21.945	3.656	0.224	0.245	0.976	1.321	1.849
INCHES	1.452	0.388	0.681	3.327	3.870	1.165	0.201	0.012	0.013	0.054	0.070	0.101
STA AV	0.653	0.489	0.566	1.526	2.812	1.422	0.204	0.039	0.020	0.057	0.108	0.130

NOTES: To convert CFS to IN/DAY, multiply by 0.001769. STA AV amounts based on 1967-69 record period.

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 18 - 22, 1969										
RG 145X37			RG 145X37							
1-18	0.0		1-18	2226	0.0	0.0	1-19	716	7.380	0.0
1-19		0.004		2400	0.0255	0.04		1144	13.640	0.0035
			1-19	413	0.0403	0.21		1246	14.830	0.0046
				619	0.0714	0.36		1356	23.510	0.0062
				812	0.0372	0.43		1528	32.460	0.0094
WATERSHED CONDITIONS: Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted the low lying snow.				936	0.1072	0.58		1630	37.750	0.0121
				1010	0.0176	0.59		1818	40.330	0.0173
				1144	0.0511	0.67		1908	48.790	0.0200
				1323	0.1091	0.85		2026	76.940	0.0260
				1519	0.0983	1.04		2116	89.780	0.0311
				1642	0.0361	1.09		2400	72.160	0.0474
				1802	0.0825	1.20	1-20	256	66.110	0.0623
				1903	0.1476	1.35		520	55.690	0.0731
				1955	0.1731	1.50		700	52.480	0.0797
				2035	0.1650	1.61		858	59.720	0.0878
				2142	0.0716	1.69		1056	75.320	0.0976
				2233	0.1412	1.81		1206	80.230	0.1043
				2400	0.0690	1.91		1300	76.940	0.1095
			1-20	122	0.0951	2.04		1358	76.940	0.1150
				311	0.0330	2.10		1512	86.230	0.1224
				505	0.0368	2.17		1758	82.770	0.1396
				605	0.0500	2.22		1828	86.230	0.1427
				742	0.0680	2.33		1844	92.510	0.1445
				810	0.1500	2.40		1922	135.540	0.1498
				852	0.0857	2.46		1944	161.990	0.1538
				920	0.1071	2.51		2026	184.300	0.1627
				1006	0.0261	2.53		2106	177.120	0.1716
				1029	0.0522	2.55		2144	181.410	0.1800
				1109	0.0300	2.57		2228	197.710	0.1902
				1337	0.0	2.57		2328	270.790	0.2075
				1406	0.0207	2.58		2400	290.030	0.2185
				1728	0.0	2.58	1-21	48	270.790	0.2350
				1752	0.1000	2.62		118	267.040	0.2449
				1821	0.2069	2.72		236	288.070	0.2715
				1903	0.2143	2.87		330	376.110	0.2935
				1949	0.0782	2.93		442	404.910	0.3280
				2051	0.0290	2.96		508	376.110	0.3405
				2117	0.1154	3.01		536	376.110	0.3534
				2144	0.0444	3.03		724	318.470	0.3995
				2234	0.1800	3.18		746	331.210	0.4083
				2326	0.1962	3.35		918	322.680	0.4453
			1-21	2400	0.1058	3.41		948	290.030	0.4566
				55	0.0327	3.44		1020	292.000	0.4680
				142	0.1276	3.54		1120	250.620	0.4880
				219	0.0811	3.59		1216	228.120	0.5045
				301	0.2000	3.73		1416	231.490	0.5384
				330	0.0621	3.76		1508	211.750	0.5526
				422	0.1847	3.92		1718	160.660	0.5823
				528	0.1182	4.05		1926	126.270	0.6049
				713	0.0857	4.20		2118	114.240	0.6214
				940	0.0776	4.39		2400	99.090	0.6426
				1121	0.0178	4.42	1-22	908	72.940	0.7005
				1245	0.0571	4.50		1416	66.850	0.7269
				1313	0.0429	4.52		2400	52.480	0.7697
				1406	0.0566	4.57				
				1529	0.0578	4.65				
				1705	0.0187	4.68				
				1856	0.0108	4.70				

NOTES: To convert CFS to IN/HR, multiply by 0.00007372.



EVENT OF JANUARY 18 - 22, 1969
REYNOLDS, IDAHO TOLLGATE WATERSHED (116083)

REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)

LOCATION: Owyhee County, Idaho; 35 miles south of Nampa, Idaho; an east-flowing tributary to Reynolds Creek, tributary to the Snake River.

AREA: 306.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969 P	6.21	1.12	0.79	2.20	0.70	4.93	0.16	0.0	0.37	3.03	0.41	2.28	22.20	
Q	2.588	0.577	1.270	2.733	0.973	0.196	0.058	0.003	0.002	0.011	0.063	0.112	8.586	
STA AV P	3.70	1.94	0.94	1.66	1.22	2.64	0.15	1.57	0.33	2.00	1.60	2.30	20.05	
Q	1.291	0.698	0.725	1.285	0.730	0.271	0.047	0.001	0.001	0.006	0.069	0.133	5.257	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date						
1969	1-21 0.053	1-21 0.050	1-20 0.096	1-20 0.261	1-20 0.445	1-20 0.720	1-20 1.050	1-19 1.734						
MAXIMUMS FOR PERIOD OF RECORD														
	1-21 0.053	1-21 0.050	1-20 0.096	1-20 0.261	1-20 0.445	1-20 0.720	1-20 1.050	1-19 1.734						
	1969	1969	1969	1969	1969	1969	1969	1969						

NOTES: Watershed conditions: Watershed is sagebrush rangeland used almost exclusively for cattle grazing. Willows are common along watercourses and in seep areas. Vegetation consists largely of big sagebrush, bitterbrush, Idaho fescue, Sandberg bluegrass, bluebunch wheatgrass, squirreltail grass, and snowberry. 10% of the area has a vegetative cover of 0-25%, 35% of the area has a vegetative cover of 26-50%, 20% of the area has a vegetative cover of 51-75%, and 35% of the area has a vegetative cover of 76-100%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 68.11-6. Records started: Precipitation - 1963; Runoff - 1967. Precipitation: Thiessen weighted average 'Computed Actual' amounts from 3 rain gages. Station average precipitation amounts based on 1968-69 record period. Station average runoff amounts based on 1967-69 record period. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho, 50 miles N.E. of watershed.

1969 DAILY PRECIPITATION (inches)													REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.06	0.03	0.11	0.0	0.05	0.0	0.0	0.0	0.0	0.35	0.0	0.0		
2	0.02	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0		
3	0.02	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
5	0.0	0.0	0.11	0.03	0.0	0.36	0.03	0.0	0.0	0.0	0.05	0.0		
6	0.0	0.04	0.06	1.42	0.0	0.06	0.02	0.0	0.0	0.0	0.11	0.0		
7	0.19	0.01	0.07	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0		
8	0.0	0.0	0.25	0.0	0.0	0.31	0.0	0.0	0.0	0.25	0.0	0.17		
9	0.0	0.05	0.03	0.0	0.0	0.03	0.0	0.0	0.06	0.0	0.0	0.00		
10	0.0	0.07	0.0	0.0	0.0	0.43	0.0	0.0	0.04	0.48	0.0	0.03		
11	0.34	0.03	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.00	0.08		
12	0.57	0.30	0.0	0.0	0.19	0.01	0.0	0.0	0.0	0.0	0.0	0.14		
13	0.31	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.03		
14	0.0	0.01	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
15	0.16	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.16	0.0		
16	0.02	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.78	0.07	0.0		
17	0.01	0.0	0.05	0.09	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0		
18	0.07	0.0	0.05	0.45	0.04	0.0	0.0	0.0	0.00	0.0	0.0	0.0		
19	1.46	0.0	0.0	0.01	0.11	0.81	0.0	0.0	0.09	0.0	0.0	0.34		
20	0.98	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.17	0.0	0.0	0.24		
21	0.84	0.04	0.0	0.0	0.0	0.11	0.0	0.0	0.01	0.0	0.0	0.80		
22	0.10	0.01	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.01		
23	0.02	0.05	0.00	0.09	0.0	0.82	0.0	0.0	0.0	0.0	0.0	0.13		
24	0.0	0.14	0.0	0.09	0.0	0.81	0.10	0.0	0.0	0.0	0.0	0.0		
25	0.46	0.0	0.0	0.02	0.0	0.24	0.01	0.0	0.0	0.0	0.0	0.20		
26	0.32	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.08		
27	0.14	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.03	0.0	0.0		
28	0.12	0.01	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.30	0.0	0.0		
29	0.01	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0		
30	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	6.21	1.12	0.79	2.20	0.70	4.93	0.16	0.0	0.37	3.03	0.41	2.28		
STA AV	3.70	1.94	0.94	1.66	1.22	2.64	0.15	1.57	0.33	2.00	1.60	2.30		

NOTES: Values are Thiessen weighted average 'Actual' amounts from 3 recording pairs of gages (shielded and unshielded). 'Actual' amounts were computed as per relationship developed by W. R. Hanson, "Computing Actual Precipitation", Proceedings of WMO-IDHS Symposium, Gellø, Norway, August, 1972. The equation used is: $\log_e (U/S) = \log_e (U/A) - \log_e (S/A)$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period. For temperature information, see table of daily maximum and minimum values included for Watersheds 68.001 and 68.014.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.06	0.03	0.06	0.0	0.03	0.0	0.0	0.0	0.0	0.34	0.0	0.0
2	0.02	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0
3	0.02	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
5	0.0	0.0	0.06	0.01	0.0	0.35	0.03	0.0	0.0	0.0	0.04	0.0
6	0.0	0.03	0.02	0.38	0.0	0.06	0.02	0.0	0.0	0.0	0.10	0.0
7	0.17	0.01	0.03	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
8	0.0	0.0	0.08	0.0	0.0	0.30	0.0	0.0	0.0	0.19	0.0	0.16
9	0.0	0.04	0.03	0.0	0.0	0.03	0.0	0.0	0.06	0.0	0.0	0.00
10	0.0	0.05	0.0	0.0	0.0	0.13	0.0	0.0	0.04	0.20	0.0	0.02
11	0.22	0.02	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.00	0.05
12	0.38	0.21	0.0	0.0	0.13	0.01	0.0	0.0	0.0	0.0	0.0	0.09
13	0.23	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.02
14	0.0	0.00	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.01
15	0.10	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.12	0.0
16	0.01	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.05	0.0
17	0.0	0.0	0.02	0.06	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0
18	0.05	0.0	0.01	0.29	0.03	0.0	0.0	0.0	0.00	0.0	0.0	0.0
19	1.08	0.0	0.0	0.01	0.09	0.27	0.0	0.0	0.09	0.0	0.0	0.31
20	0.70	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.17	0.0	0.0	0.21
21	0.62	0.02	0.0	0.0	0.0	0.05	0.0	0.0	0.01	0.0	0.0	0.67
22	0.06	0.01	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.01
23	0.00	0.03	0.00	0.07	0.0	0.27	0.0	0.0	0.0	0.0	0.0	0.12
24	0.0	0.08	0.0	0.07	0.0	0.28	0.10	0.0	0.0	0.0	0.0	0.0
25	0.20	0.0	0.0	0.01	0.0	0.08	0.01	0.0	0.0	0.0	0.0	0.13
26	0.14	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.05
27	0.06	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.02	0.0	0.0
28	0.05	0.00	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.21	0.0	0.0
29	0.00	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
30	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0
31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.18	0.78	0.37	0.90	0.52	2.49	0.16	0.0	0.37	1.71	0.33	1.88
STA AV												

NOTES: Values are Thiessen weighted average amounts from 3 unshielded recording gages. STA AV do not apply to unshielded rain gage records.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.06	0.03	0.08	0.0	0.03	0.0	0.0	0.0	0.0	0.34	0.0	0.0
2	0.02	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0
3	0.02	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
5	0.0	0.0	0.09	0.02	0.0	0.35	0.03	0.0	0.0	0.0	0.05	0.0
6	0.0	0.03	0.04	0.80	0.0	0.06	0.02	0.0	0.0	0.0	0.10	0.0
7	0.18	0.01	0.05	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
8	0.0	0.0	0.17	0.0	0.0	0.30	0.0	0.0	0.0	0.22	0.0	0.16
9	0.0	0.04	0.03	0.0	0.0	0.03	0.0	0.0	0.06	0.0	0.0	0.00
10	0.0	0.05	0.0	0.0	0.0	0.26	0.0	0.0	0.04	0.32	0.0	0.03
11	0.30	0.02	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.00	0.07
12	0.51	0.25	0.0	0.0	0.17	0.01	0.0	0.0	0.0	0.0	0.0	0.11
13	0.28	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.02
14	0.0	0.01	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.01
15	0.13	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.14	0.0
16	0.01	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.06	0.0
17	0.00	0.0	0.04	0.07	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0
18	0.07	0.0	0.03	0.37	0.04	0.0	0.0	0.0	0.00	0.0	0.0	0.0
19	1.30	0.0	0.0	0.01	0.10	0.48	0.0	0.0	0.09	0.0	0.0	0.32
20	0.87	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.17	0.0	0.0	0.23
21	0.75	0.03	0.0	0.0	0.0	0.07	0.0	0.0	0.01	0.0	0.0	0.74
22	0.08	0.01	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.01
23	0.01	0.04	0.00	0.08	0.0	0.48	0.0	0.0	0.0	0.0	0.0	0.12
24	0.0	0.12	0.0	0.08	0.0	0.48	0.10	0.0	0.0	0.0	0.0	0.0
25	0.32	0.0	0.0	0.02	0.0	0.15	0.01	0.0	0.0	0.0	0.0	0.16
26	0.21	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.07
27	0.10	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.03	0.0	0.0
28	0.08	0.00	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.25	0.0	0.0
29	0.01	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
30	0.01	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0
31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	5.35	0.94	0.58	1.45	0.63	3.43	0.16	0.0	0.37	2.29	0.37	2.08
STA AV												

NOTES: Values are Thiessen weighted average amounts from 3 shielded recording gages. STA AV do not apply to shielded rain gage records.

1969 MEAN DAILY DISCHARGE (cfs) REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.064	0.454	0.197	1.392	0.542	0.120	0.058	0.003	0.0	0.001	0.017	0.030
2	0.070	0.387	0.213	1.284	0.488	0.105	0.045	0.003	0.0	0.003	0.017	0.030
3	0.073	0.340	0.214	1.249	0.488	0.098	0.046	0.003	0.0	0.003	0.019	0.032
4	0.215	0.326	0.230	1.249	0.488	0.078	0.049	0.003	0.0	0.003	0.021	0.034
5	0.690	0.312	0.229	1.357	0.471	0.096	0.044	0.003	0.0	0.002	0.023	0.034
6	0.403	0.299	0.233	1.440	0.437	0.094	0.044	0.003	0.0	0.002	0.027	0.034
7	0.217	0.275	0.214	1.319	0.454	0.079	0.044	0.003	0.0	0.002	0.032	0.034
8	0.164	0.233	0.214	1.587	0.522	0.097	0.041	0.003	0.0	0.003	0.032	0.034
9	0.127	0.214	0.204	1.802	0.556	0.105	0.039	0.003	0.0 T	0.003	0.030	0.034
10	0.116	0.241	0.187	1.503	0.576	0.080	0.034	0.003	0.001	0.003	0.030	0.034
11	0.133	0.252	0.192	1.465	0.597	0.098	0.027	0.003	0.001	0.003	0.030	0.034
12	0.479	0.317	0.166	1.357	0.585	0.068	0.029	0.001	0.001	0.003	0.030	0.036
13	1.825	0.275	0.181	1.284	0.538	0.068	0.029	0.0	0.002	0.003	0.027	0.039
14	1.369	0.252	0.206	1.319	0.577	0.062	0.025	0.0	0.002	0.003	0.025	0.039
15	0.701	0.252	0.270	1.284	0.557	0.058	0.023	0.0	0.002	0.003	0.027	0.039
16	0.436	0.252	0.302	1.183	0.503	0.059	0.019	0.0	0.002	0.010	0.034	0.039
17	0.359	0.252	0.688	1.118	0.488	0.057	0.016	0.0	0.002	0.010	0.030	0.039
18	0.302	0.252	0.639	1.289	0.454	0.051	0.017	0.0	0.002	0.005	0.030	0.039
19	1.764	0.252	0.517	1.061	0.420	0.081	0.015	0.0	0.002	0.003	0.027	0.049
20	5.492	0.252	0.633	0.967	0.387	0.083	0.012	0.0	0.002	0.003	0.025	0.054
21	7.778	0.252	0.711	0.996	0.340	0.057	0.007	0.0	0.001	0.003	0.025	0.142
22	2.427	0.242	0.863	1.026	0.292	0.050	0.006	0.0	0.0	0.003	0.027	0.111
23	1.402	0.214	0.586	1.056	0.250	0.072	0.007	0.0	0.0	0.003	0.030	0.070
24	1.089	0.205	0.554	1.026	0.244	0.175	0.012	0.0	0.0	0.003	0.030	0.063
25	1.029	0.214	0.691	0.940	0.214	0.100	0.019	0.0	0.0	0.003	0.030	0.056
26	1.200	0.205	0.880	0.857	0.199	0.082	0.007	0.0	0.0	0.004	0.027	0.053
27	0.940	0.197	0.978	0.781	0.205	0.103	0.008	0.0	0.0	0.005	0.025	0.050
28	0.762	0.197	1.063	0.707	0.179	0.086	0.008	0.0	0.0	0.013	0.025	0.044
29	0.579		1.166	0.640	0.168	0.081	0.005	0.0	0.0	0.010	0.027	0.039
30	0.557		1.404	0.597	0.149	0.069	0.003	0.0	0.0 T	0.010	0.030	0.039
31	0.503		1.503		0.139		0.003	0.0		0.013		0.039
MEAN	1.0731	0.2650	0.5268	1.1713	0.4036	0.0838	0.0241	0.0011	0.0007	0.0046	0.0271	0.0466
INCHES	2.588	0.577	1.270	2.733	0.973	0.196	0.058	0.003	0.002	0.011	0.063	0.112
STA AV	1.291	0.698	0.725	1.285	0.730	0.271	0.047	0.001	0.001	0.006	0.069	0.133

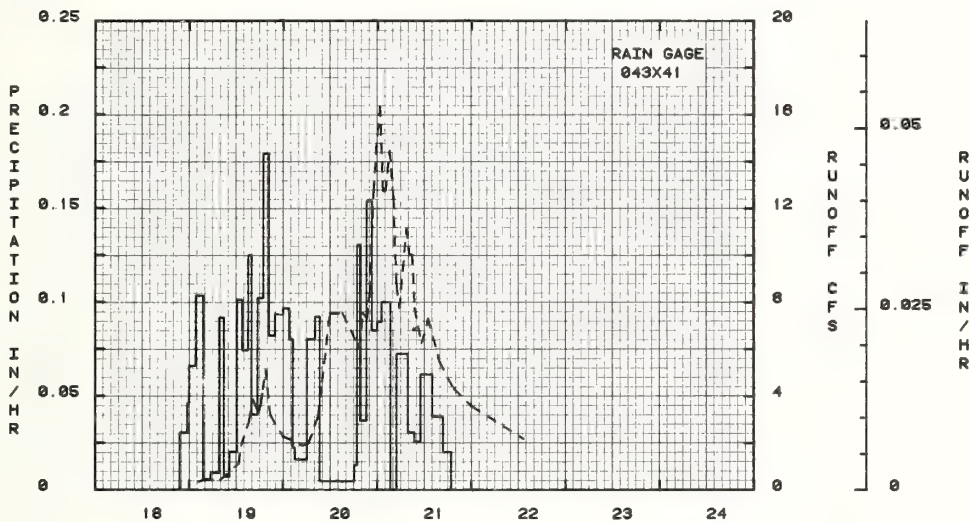
NOTES: To convert CFS to IN/DAY, multiply by 0.077783. STA AV based on 1968-69 record period.

1969 SELECTED RUNOFF EVENT REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)											
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JANUARY 18 - 22, 1969											
RG 043141 RG 043141											
1-18	0.0		1-18	2136	0.0	0.0	1-19	220	0.330	0.0	
1-19		0.002		2334	0.0305	0.06		338	0.420	0.0016	
				2400	0.0462	0.08		756	0.420	0.0075	
			1-19	140	0.0660	0.19		1240	1.120	0.0193	
				336	0.1034	0.39		1316	1.880	0.0222	
WATERSHED CONDITIONS:											
Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted snow in the lower elevations.											
				528	0.0054	0.40		1518	2.920	0.0380	
				742	0.0090	0.42		1616	3.840	0.0486	
				854	0.0917	0.53		1750	3.300	0.0667	
				1018	0.0201	0.54		1820	3.700	0.0724	
				1216	0.0203	0.58		1850	4.290	0.0789	
				1333	0.1013	0.71		1936	5.120	0.0906	
				1510	0.0742	0.83		2048	3.170	0.1067	
				1558	0.1250	0.93		2400	2.260	0.1348	
				1728	0.0400	0.99	1-20	456	1.880	0.1679	
				1856	0.1023	1.14		628	1.970	0.1775	
				2023	0.1793	1.40		900	3.170	0.1986	
				2158	0.0821	1.53		956	4.610	0.2104	
				2400	0.0934	1.72		1156	7.510	0.2497	
			1-20	133	0.0968	1.87		1510	7.510	0.3284	
				233	0.0800	1.95		1922	6.040	0.4206	
				300	0.0222	1.96		2020	7.510	0.4418	
				606	0.0161	2.01		2120	7.290	0.4658	
				813	0.0803	2.18		2202	8.450	0.4836	
				918	0.0923	2.28		2300	12.730	0.5168	
				1342	0.0045	2.30		2400	15.190	0.5620	
				1804	0.0046	2.32	1-21	38	16.340	0.5944	
				1849	0.0133	2.33		124	12.730	0.6305	
				1935	0.1304	2.43		202	12.730	0.6566	
				2113	0.0367	2.49		308	14.460	0.7051	
				2235	0.1537	2.70		404	12.400	0.7457	
			1-21	2400	0.0847	2.82		452	8.690	0.7730	
				107	0.0896	2.92		538	7.740	0.7934	
				319	0.1000	3.14		724	11.140	0.8474	
				457	0.0	3.14		810	10.000	0.8737	
				751	0.0724	3.35		856	10.000	0.8985	

NOTES: To convert CFS to IN/HR, multiply by .003241.

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)
EVENT OF JANUARY 18 - 22, 1969 (CONTINUED)									
1-21	929	0.0306	3.40	1-21	930	7.740	0.9148		
	1103	0.0255	3.44		1120	6.240	0.9563		
	1359	0.0614	3.62		1300	7.290	0.9928		
	1649	0.0388	3.73		1552	5.470	1.0521		
	1849	0.0200	3.77		1930	4.290	1.1096		
						2400	3.560	1.1669	
						1316	2.160	1.2899	
						1-22			

NOTES: To convert CFS to IN/HR, multiply by .003241.



EVENT OF JANUARY 18 - 22, 1969
REYNOLDS, IDAHO MURPHY CREEK WATERSHED (043004)

REYNOLDS, IDAHO SUMMIT WATERSHED (048077)

LOCATION: Owyhee County, Idaho; 30 miles south ofampa, Idaho, a west-flowing tributary to Reynolds Creek, tributary to the Snake River.

AREA: 205.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														REYNOLDS, IDAHO SUMMIT WATERSHED (048077)															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	4.25	0.71	0.38	0.49	0.51	2.98	0.16	0.0	0.16	1.47	0.17	0.86	12.14															
	Q	0.009	0.0	0.0	0.0	0.0	0.070	0.0	0.0	0.0	0.0	0.0	0.0	0.079															
STA AV	P	2.31	0.65	0.26	0.34	0.69	1.68	0.10	1.88	0.08	0.93	0.64	0.95	10.51															
	Q	0.003	0.0	0.0	0.0	0.0	0.024	0.0	0.028	0.0	0.0	0.0	0.0	0.055															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																					
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days													
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		6-19	0.258	6-19	0.059	6-19	0.059	6-19	0.070	6-20	0.070	6-20	0.070	6-19	0.070	6-13	0.070												
MAXIMUMS FOR PERIOD OF RECORD																													
		6-19	0.258	6-19	0.059	6-19	0.059	6-19	0.070	6-20	0.070	6-20	0.070	6-19	0.070	8- 9	0.083												
		1969		1969		1969		1969		1969		1969		1969		1968													

NOTES: Watershed conditions: Sagebrush rangeland with almost exclusive cattle grazing in early spring and late fall. Numerous barren ridges. Vegetation consists largely of big sagebrush, cheatgrass, Sandberg bluegrass, bluebunch wheatgrass, and squirreltail grass. 25% of the area has a vegetative cover of 0-25% and 75% of the area has a vegetative cover of 25-50%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 68.12-5. Records started: Precipitation - 1963; Runoff - 1967. Precipitation: 'Computed Actual' amounts from 1 rain gage. Station average precipitation amounts are based on 1968-69 period of record. Station average runoff amounts are based on 1967-69 period of record. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho, 50 miles N.E. of watershed.

1969 DAILY PRECIPITATION (inches)													REYNOLDS, IDAHO SUMMIT WATERSHED (048077)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.0	0.0	0.06	0.0	0.06	0.0	0.0	0.0	0.0	0.06	0.0	0.0													
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0													
3	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
4	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
5	0.0	0.0	0.04	0.07	0.0	0.44	0.0	0.0	0.0	0.0	0.03	0.0													
6	0.0	0.11	0.0	0.37	0.0	0.03	0.0	0.0	0.0	0.0	0.12	0.0													
7	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
8	0.0	0.0	0.17	0.0	0.0	0.28	0.0	0.0	0.0	0.03	0.0	0.23													
9	0.0	0.06	0.07	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0													
10	0.0	0.03	0.0	0.0	0.0	0.46	0.0	0.0	0.0	0.12	0.0	0.03													
11	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07													
12	0.22	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02													
13	0.05	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.01													
14	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
15	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0													
16	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.02	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0													
18	0.06	0.0	0.0	0.05	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
19	0.88	0.0	0.0	0.0	0.08	1.29	0.0	0.0	0.03	0.0	0.0	0.08													
20	1.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.24													
21	0.87	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.07													
22	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
23	0.01	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.07													
24	0.0	0.11	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0													
25	0.13	0.0	0.0	0.0	0.0	0.03	0.16	0.0	0.0	0.0	0.0	0.0													
26	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
27	0.09	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.09	0.0	0.04													
28	0.21	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.02	0.0	0.0													
29	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0													
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
TOTAL	4.25	0.71	0.38	0.49	0.51	2.98	0.16	0.0	0.16	1.47	0.17	0.86													
STA AV	2.31	0.65	0.26	0.34	0.69	1.68	0.10	1.88	0.08	0.93	0.64	0.95													

NOTES: Values are 'Actual' amounts from a pair of recording gages (shielded and unshielded) at Station 049161. 'Actual' amounts were computed as per relationship developed by W. E. Hamon, "Computing Actual Precipitation", Proceedings of WMO-IDHS Symposium, Gello, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) \times 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period. For temperature information, see table of daily maximum and minimum values included for 68.012.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO SUMMIT WATERSHED (048077)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.06	0.0	0.06	0.0	0.0	0.0	0.0	0.06	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0
3	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.02	0.04	0.0	0.34	0.0	0.0	0.0	0.0	0.03	0.0
6	0.0	0.11	0.0	0.24	0.0	0.03	0.0	0.0	0.0	0.0	0.12	0.0
7	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.08	0.0	0.0	0.28	0.0	0.0	0.0	0.03	0.0	0.15
9	0.0	0.06	0.04	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0
10	0.0	0.03	0.0	0.0	0.0	0.46	0.0	0.0	0.0	0.12	0.0	0.02
11	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
12	0.18	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
13	0.03	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.01
14	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0
16	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.02	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0
18	0.05	0.0	0.0	0.05	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.68	0.0	0.0	0.0	0.08	1.29	0.0	0.0	0.03	0.0	0.0	0.08
20	0.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.24
21	0.41	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.07
22	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.01	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.07
24	0.0	0.11	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0
25	0.09	0.0	0.0	0.0	0.0	0.03	0.16	0.0	0.0	0.0	0.0	0.0
26	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.06	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.09	0.0	0.04
28	0.14	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.02	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	2.54	0.56	0.24	0.33	0.51	2.88	0.16	0.0	0.16	1.44	0.17	0.74
STA AV												

NOTES: Values are amounts from unshielded recording gage 049461. STA AV do not apply to unshielded rain gage records.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO SUMMIT WATERSHED (048077)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.06	0.0	0.06	0.0	0.0	0.0	0.0	0.07	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0
3	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.03	0.05	0.0	0.39	0.0	0.0	0.0	0.0	0.03	0.0
6	0.0	0.11	0.0	0.31	0.0	0.03	0.0	0.0	0.0	0.0	0.12	0.0
7	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.13	0.0	0.0	0.28	0.0	0.0	0.0	0.03	0.0	0.19
9	0.0	0.06	0.06	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0
10	0.0	0.03	0.0	0.0	0.0	0.46	0.0	0.0	0.0	0.12	0.0	0.03
11	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
12	0.20	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
13	0.05	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.01
14	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0
16	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.02	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0
18	0.06	0.0	0.0	0.05	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.82	0.0	0.0	0.0	0.08	1.29	0.0	0.0	0.03	0.0	0.0	0.08
20	0.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.24
21	0.61	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.07
22	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.01	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.07
24	0.0	0.11	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0
25	0.11	0.0	0.0	0.0	0.0	0.03	0.16	0.0	0.0	0.0	0.0	0.0
26	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.07	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.09	0.0	0.04
28	0.17	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.02	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	3.37	0.66	0.32	0.41	0.51	2.93	0.16	0.0	0.16	1.46	0.17	0.80
STA AV												

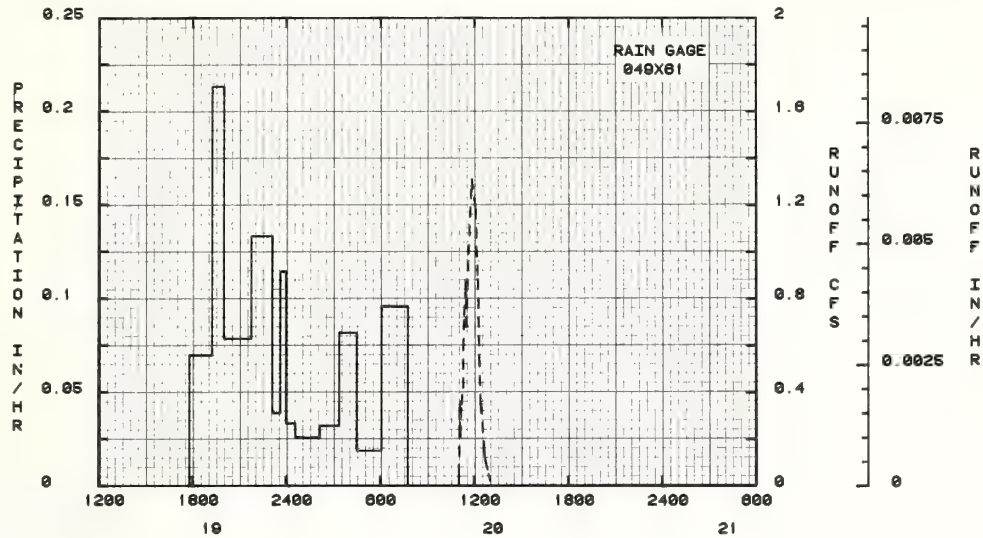
NOTES: Values are amounts from shielded recording gage 049561. STA AV do not apply to shielded rain gage records.

1969 MEAN DAILY DISCHARGE (cfs) REYNOLDS, IDAHO SUMMIT WATERSHED (048077)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.602	0.0	0.0	0.0	0.0	0.0	0.0
20	0.052	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.024	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0024	0.0	0.0	0.0	0.0	0.0201	0.0	0.0	0.0	0.0	0.0	0.0
INCHES	0.009	0.0	0.0	0.0	0.0	0.070	0.0	0.0	0.0	0.0	0.0	0.0
STA AV	0.003	0.0	0.0	0.0	0.0	0.024	0.0	0.028	0.0	0.0	0.0	0.0

NOTES: To convert CFS to IN/DAY, multiply by 0.1161056. STA AV amounts are based on 1967-69 records period.

1969 SELECTED RUNOFF EVENT						REYNOLDS, IDAHO SUMMIT WATERSHED (048077)					
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JANUARY 19 - 20, 1969											
RG 049I61			RG 049I61								
1-19	0.20		1-19	1749	0.0	0.0	1-20	1102	0.0	0.0	
1-20		0.0		1832	0.0698	0.05		1103	0.06	0.0	
				1915	0.0698	0.10		1104	0.30	0.0	
				2000	0.2133	0.26		1106	0.36	0.0001	
				2147	0.0785	0.40		1107	0.21	0.0001	
WATERSHED CONDITIONS: Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted the low lying snow.				2308	0.1333	0.58		1113	0.36	0.0002	
				2339	0.0387	0.60		1118	0.42	0.0004	
				2400	0.1143	0.64		1119	0.60	0.0004	
			1-20	36	0.0333	0.66		1122	0.73	0.0006	
				209	0.0258	0.70		1128	0.88	0.0010	
				324	0.0320	0.74		1131	0.68	0.0012	
				430	0.0818	0.83		1138	1.00	0.0017	
				606	0.0188	0.86		1151	1.32	0.0029	
				746	0.0960	1.02		1205	1.18	0.0043	
								1214	0.88	0.0050	
							1220	0.56	0.0053		
							1226	0.36	0.0055		
							1240	0.15	0.0058		
							1244	0.12	0.0058		
							1256	0.06	0.0059		
							1303	0.02	0.0059		

NOTES: To convert CFS to IN/HR, multiply by 0.004638.

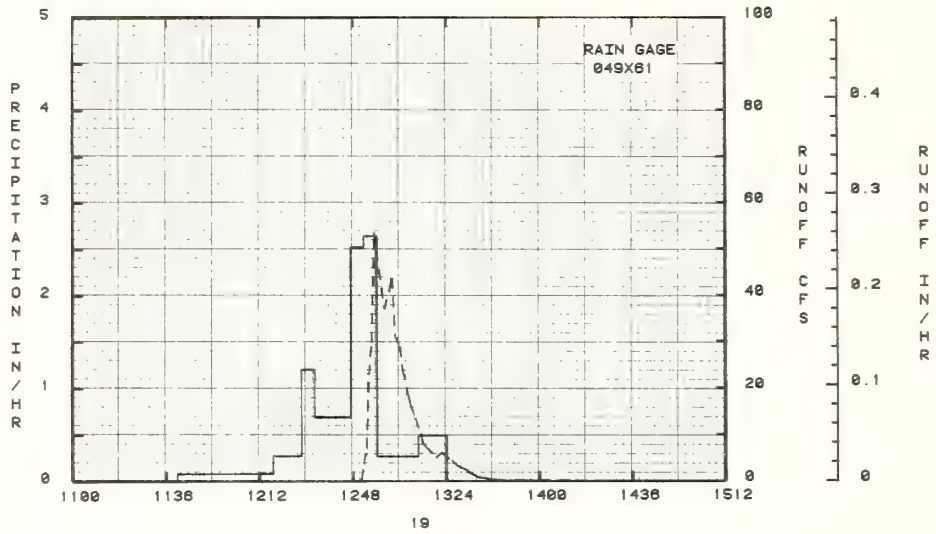


EVENT OF JANUARY 19 - 20, 1969
REYNOLDS, IDAHO SUMMIT WATERSHED (048077)

1969 SELECTED RUNOFF EVENT				REYNOLDS, IDAHO SUMMIT WATERSHED (048077)					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)
									Acc.
									(inches)
EVENT OF JUNE 19, 1969									
RG 049X61			RG 049X61						
6-19	0.0	0.0	6-19	1140	0.0	0.0	6-19	1250	0.0
				1217	0.0811	0.05		1251	0.49
				1228	0.2727	0.10		1252	3.85
				1233	1.2000	0.20		1253	7.29
				1247	0.6857	0.36		1254	22.99
				1252	2.5200	0.57		1255	30.05
				1257	2.6400	0.79		1256	53.40
				1313	0.2625	0.86		1300	37.07
				1324	0.4909	0.95		1303	43.57
								1304	31.25
								1306	28.88
								1307	23.99
								1309	18.82
								1310	16.34
								1312	13.40
								1314	10.00
								1315	7.97
								1316	7.29
								1320	5.12
								1322	6.04
								1326	4.29
								1328	3.30
								1331	2.47
								1333	1.62
								1336	0.73
								1340	0.39
								1343	0.20
								1348	0.07
								1352	0.06
								1354	0.04
								1400	0.02
								1414	0.01
								1437	0.00

WATERSHED CONDITIONS:
Sagebrush rangeland with almost exclusive cattle grazing in early spring and late fall. Numerous barren ridges. Vegetation consists largely of big sagebrush, cheatgrass, Sandberg bluegrass, bluebunch wheatgrass, and squirreltail grass. 25% of the area has a vegetative cover of 0-25% and 75% of the area has a vegetative cover of 25-50%.

NOTES: To convert CFS to IN/HR, multiply by 0.004838.



EVENT OF JUNE 19, 1969
REYNOLDS, IDAHO SUMMIT WATERSHED (048077)

REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)

LOCATION: Owyhee County, Idaho; 34 miles south of Hampa, north flowing tributary to the east fork of Reynolds Creek, Snake River Basin.

AREA: 100.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)						REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	12.16	2.46	1.12	1.80	0.71	3.20	0.32	0.0	0.13	2.66	0.90	4.39	29.85			
	Q	0.230	0.163	0.215	4.678	12.366	3.921	0.279	0.044	0.033	0.073	0.076	0.074	22.150			
STA AV	P	7.42	4.01	1.36	1.98	1.04	1.92	0.30	2.27	0.31	1.99	3.18	6.47	32.21			
	Q	0.176	0.267	0.445	2.495	7.312	3.322	0.289	0.072	0.044	0.075	0.156	0.128	14.781			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5-12	0.038	5-12	0.037	5-12	0.072	5-10	0.198	5-10	0.375	5-13	0.662	5-12	1.288	5- 8	4.700
MAXIMUMS FOR PERIOD OF RECORD																	
		5-22	0.054	5-22	0.052	5-22	0.103	5-22	0.294	5-22	0.505	5-22	0.815	5-22	1.594	5-17	5.113
		1967		1967		1967		1967		1967		1967		1967		1967	

NOTES: Watershed conditions: Rangeland watershed with seasonal cattle and sheep grazing. Scrub aspen, willow, scattered Douglas fir, and sagebrush with natural mountain meadows. Vegetative cover varies with annual precipitation type of cover is 32% shrub and brush, 17% grass and forbes, and 9% rock and rock fragments. For map of watershed see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, p. 68.13-4. Records started: Precipitation-1963; Runoff-1966. Precipitation: "Computed Actual" amounts from one rain gauge. Station average precipitation values based on 1968-69 record period. Station average runoff values based on 1966-69 record period. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho, 60 miles N.E. of watershed.

SNOW COURSE DATA: DATE OF MEASUREMENT/AVERAGE WATER CONTENT (INCHES)										
Course#	Date	Inches	Date	Inches	Date	Inches	Date	Inches	Date	Inches
176007	010269	9.50	011669	12.00	013069	21.20	021469	22.40	022869	25.00
176007	032069	26.20	032669	26.00	040269	25.40	041069	24.40	042569	16.20
176007	050869	6.80	121569	5.12					043069	14.00

NOTES: For snow course location information, see Hydrologic Data for Experimental Agricultural Watersheds in the United States 1968, USDA Misc. Pub. 1330, p. 68.001-6.

1969 DAILY AIR TEMPERATURE (degrees F)													REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min		
1	34 30	21 12	29 20	41 28	37 26	59 41	73 52	76 60	76 58	58 36	47 32	46 33		
2	34 29	20 12	29 19	46 32	40 23	69 40	69 54	81 61	78 58	38 27	48 26	46 32		
3	32 27	25 23	25 22	38 28	38 26	71 52	57 42	82 59	58 42	35 26	44 41	42 28		
4	40 31	28 23	28 21	48 34	47 27	76 58	62 42	78 49	60 38	37 25	52 42	30 19		
5	41 36	28 19	30 18	47 33	52 34	75 53	59 45	64 38	64 37	45 28	45 30	27 16		
6	44 37	25 21	22 16	36 22	60 40	68 52	55 41	67 46	77 50	52 35	32 24	25 20		
7	38 11	22 18	22 17	28 20	62 44	68 52	58 41	74 55	73 56	58 40	28 26	22 20		
8	12 8	31 20	25 14	42 24	63 44	68 49	65 54	71 48	77 46	53 33	34 26	27 20		
9	20 8	31 29	20 9	54 34	64 50	59 46	70 54	84 61	72 57	36 28	38 26	22 17		
10	27 19	35 28	26 8	39 28	61 50	59 42	77 38	84 65	63 53	30 26	40 31	22 16		
11	30 23	36 30	22 12	52 26	63 48	57 40	77 58	75 51	67 50	34 22	43 32	32 22		
12	34 28	30 18	28 14	51 35	60 45	64 45	70 50	64 41	68 52	24 18	43 32	33 30		
13	38 32	17 14	28 14	38 24	62 46	60 48	72 50	71 51	66 40	26 16	46 34	43 31		
14	33 24	24 12	31 18	36 26	50 35	62 46	70 50	82 59	54 32	30 19	48 34	42 31		
15	24 15	29 25	38 26	36 22	51 36	61 47	66 49	78 60	64 39	34 20	42 27	36 28		
16	20 14	30 19	39 30	48 28	62 41	56 44	69 50	69 52	64 46	31 29	27 16	41 29		
17	24 20	29 18	35 30	52 35	62 44	64 47	76 55	71 50	67 50	30 24	19 15	38 34		
18	30 20	25 18	31 20	36 25	62 40	68 52	74 55	74 57	62 46	32 24	29 14	38 31		
19	32 29	30 21	30 16	51 30	41 32	64 48	77 59	76 56	53 43	40 26	38 27	36 29		
20	34 30	32 18	30 20	50 27	53 30	62 47	78 54	79 59	50 38	50 33	49 36	38 29		
21	34 26	27 19	40 22	54 44	54 36	62 46	78 57	84 63	52 35	54 39	39 23	40 20		
22	27 10	22 18	40 24	63 47	63 41	52 42	77 53	84 68	60 39	55 42	36 20	29 20		
23	12 4	24 18	24 16	49 26	67 50	46 35	78 57	87 70	58 47	54 41	40 26	27 20		
24	18 14	26 12	38 25	31 22	69 53	44 34	78 54	82 60	58 41	42 31	38 26	25 21		
25	30 17	26 15	45 23	31 20	67 48	46 31	71 54	66 52	66 48	44 30	43 30	30 20		
26	32 20	23 16	47 34	36 18	61 45	45 32	73 48	76 56	72 53	48 36	40 27	20 15		
27	20 13	24 14	43 36	49 29	53 40	42 32	82 60	70 48	72 56	48 26	44 28	16 11		
28	20 10	30 20	47 34	56 34	60 36	45 32	78 59	64 44	68 52	28 24	45 32	16 8		
29	13 2		54 39	35 22	68 50	50 38	77 61	62 38	67 49	35 21	50 34	21 8		
30	16 10		50 40	46 24	60 40	61 39	80 58	66 48	53 41	43 26	48 34	22 16		
31	20 10		44 35		55 33		78 60	70 51		47 33		24 14		
AV.	28 20	34 19	34 22	46 28	57 40	59 44	72 52	75 54	65 46	41 29	41 28	31 22		
MEAN	23.8	26.8	28.0	37.2	48.4	51.6	62.0	64.4	55.6	34.8	34.5	26.6		
STA AV	29 21	33 23	34 23	39 24	55 36	62 43	74 54	72 53	64 46	48 33	38 27	28 19		

NOTES: Temperature data are taken from hygrothermograph record at station 176114. STA AV based on 1966-69 record period.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.22	0.23	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0
3	0.0	0.04	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
5	0.0	0.15	0.32	0.08	0.0	0.0	0.01	0.0	0.0	0.0	0.16	0.0
6	0.0	0.15	0.06	1.38	0.0	0.29	0.04	0.0	0.0	0.0	0.41	0.0
7	0.31	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0
8	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.34	0.0	0.19
9	0.0	0.11	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.06	0.0	0.10
10	0.0	0.04	0.20	0.0	0.0	0.73	0.0	0.0	0.0	0.32	0.0	0.25
11	0.93	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.61
12	1.09	0.17	0.0	0.0	0.36	0.02	0.0	0.0	0.0	0.0	0.0	0.20
13	0.42	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.13
14	0.0	0.07	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.20	0.48	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.06	0.14	0.0
16	0.0	0.09	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.12	0.0
17	0.0	0.05	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.33	0.04	0.0
18	0.29	0.0	0.11	0.20	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	2.98	0.0	0.0	0.0	0.03	0.30	0.0	0.0	0.0	0.0	0.0	0.56
20	1.85	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.05	0.0	0.0	0.43
21	1.32	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.49
22	0.37	0.11	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.07
23	0.02	0.30	0.0	0.03	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.34
24	0.0	0.28	0.0	0.05	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0
25	0.39	0.03	0.0	0.03	0.0	0.27	0.25	0.0	0.0	0.0	0.0	0.20
26	0.24	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.0	0.0	0.0	0.78
27	0.29	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.14	0.0	0.0
28	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
29	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.25	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	12.16	2.46	1.12	1.80	0.71	3.20	0.32	0.0	0.13	2.66	0.90	4.39
STA AV	7.42	4.01	1.36	1.98	1.04	1.92	0.30	2.27	0.31	1.99	3.18	6.47

NOTES: Values are 'Actual' amounts from a pair of recording gages (shielded and unshielded) at Station 166194. 'Actual' amounts were computed as per relationship developed by W. R. Hamon, "Computing Actual Precipitation", Proceedings of WMO-IDHS Symposium, Geilo, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) \times 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.09	0.23	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0
3	0.0	0.04	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
5	0.0	0.08	0.12	0.02	0.0	0.0	0.01	0.0	0.0	0.0	0.10	0.0
6	0.0	0.08	0.02	0.34	0.0	0.28	0.04	0.0	0.0	0.0	0.26	0.0
7	0.26	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
8	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.26	0.0	0.11
9	0.0	0.06	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.04	0.0	0.05
10	0.0	0.02	0.07	0.0	0.0	0.73	0.0	0.0	0.0	0.24	0.0	0.13
11	0.38	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.31
12	0.45	0.09	0.0	0.0	0.32	0.02	0.0	0.0	0.0	0.0	0.0	0.10
13	0.17	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.07
14	0.0	0.03	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.10	0.20	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.03	0.10	0.0
16	0.0	0.04	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.08	0.0
17	0.0	0.02	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.18	0.03	0.0
18	0.14	0.0	0.11	0.13	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.45	0.0	0.0	0.0	0.03	0.24	0.0	0.0	0.0	0.0	0.0	0.37
20	0.90	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.05	0.0	0.0	0.29
21	0.67	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.42
22	0.20	0.03	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.07
23	0.01	0.08	0.0	0.03	0.0	0.65	0.0	0.0	0.0	0.0	0.0	0.34
24	0.0	0.08	0.0	0.05	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0
25	0.21	0.0	0.0	0.03	0.0	0.26	0.25	0.0	0.0	0.0	0.0	0.10
26	0.13	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.0	0.0	0.0	0.44
27	0.15	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.10	0.0	0.0
28	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0
29	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.24	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	6.24	1.12	0.58	0.62	0.67	3.05	0.32	0.0	0.13	1.95	0.59	2.84
STA AV												

NOTES: Values are amounts from unshielded recording gage 166494. STA AV do not apply to unshielded rain gage records.

1969	DAILY PRECIPITATION (inches)					REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.15	0.23	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0
3	0.0	0.04	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
5	0.0	0.12	0.20	0.05	0.0	0.0	0.01	0.0	0.0	0.0	0.12	0.0
6	0.0	0.11	0.04	0.74	0.0	0.29	0.04	0.0	0.0	0.0	0.34	0.0
7	0.29	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
8	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.30	0.0	0.15
9	0.0	0.09	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.05	0.0	0.07
10	0.0	0.03	0.12	0.0	0.0	0.73	0.0	0.0	0.0	0.29	0.0	0.19
11	0.62	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.45
12	0.74	0.13	0.0	0.0	0.34	0.02	0.0	0.0	0.0	0.0	0.0	0.14
13	0.28	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.10
14	0.0	0.04	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.15	0.32	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.05	0.13	0.0
16	0.0	0.07	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.10	0.0
17	0.0	0.03	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.28	0.03	0.0
18	0.21	0.0	0.11	0.17	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	2.16	0.0	0.0	0.0	0.03	0.27	0.0	0.0	0.0	0.0	0.0	0.46
20	1.34	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.05	0.0	0.0	0.36
21	0.98	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.46
22	0.28	0.07	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.07
23	0.01	0.20	0.0	0.03	0.0	0.67	0.0	0.0	0.0	0.0	0.0	0.34
24	0.0	0.19	0.0	0.05	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0
25	0.30	0.02	0.0	0.03	0.0	0.26	0.25	0.0	0.0	0.0	0.0	0.15
26	0.18	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.0	0.0	0.0	0.60
27	0.22	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.12	0.0	0.0
28	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0
29	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.24	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	8.99	1.80	0.81	1.09	0.69	3.13	0.32	0.0	0.13	2.37	0.74	3.58
STA AV												

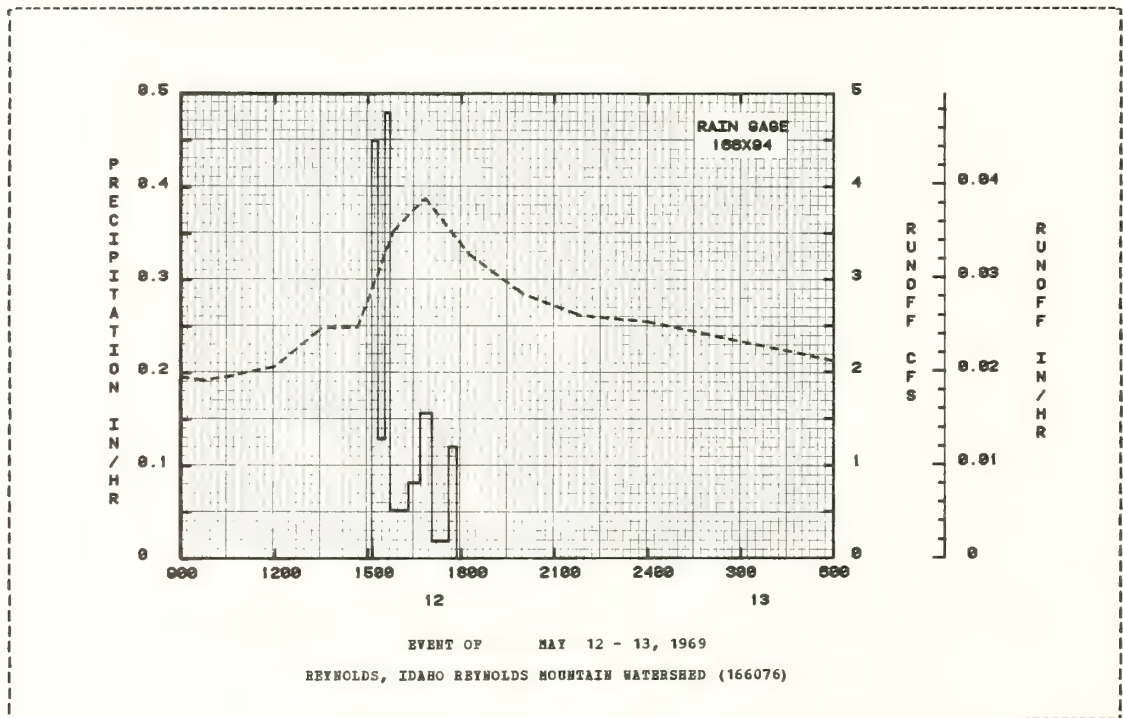
NOTES: Values are amounts from shielded recording gage 166594. STA AV do not apply to shielded rain gage records.

1969	MEAN DAILY DISCHARGE (cfs)					REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.020	0.026	0.022	0.174	0.846	0.945	0.102	0.010	0.003	0.008	0.014	0.002
2	0.022	0.026	0.021	0.228	0.782	0.876	0.086	0.009	0.003	0.012	0.014	0.003
3	0.022	0.026	0.021	0.270	0.800	0.890	0.082	0.008	0.004	0.008	0.013	0.003
4	0.024	0.026	0.021	0.283	1.078	0.920	0.074	0.008	0.005	0.007	0.013	0.003
5	0.032	0.026	0.021	0.504	1.384	0.921	0.071	0.009	0.005	0.008	0.016	0.003
6	0.041	0.026	0.022	0.514	1.614	1.001	0.071	0.009	0.005	0.007	0.019	0.003
7	0.044	0.026	0.022	0.335	1.837	0.883	0.066	0.008	0.004	0.006	0.014	0.003
8	0.041	0.026	0.022	0.255	2.067	0.933	0.057	0.007	0.003	0.009	0.015	0.003
9	0.037	0.026	0.022	0.308	2.351	0.814	0.050	0.006	0.004	0.010	0.013	0.003
10	0.035	0.026	0.022	0.346	2.636	1.001	0.044	0.006	0.004	0.008	0.013	0.003
11	0.033	0.025	0.022	0.356	2.432	0.885	0.038	0.007	0.004	0.009	0.014	0.005
12	0.031	0.023	0.022	0.489	2.476	0.664	0.038	0.007	0.004	0.006	0.014	0.005
13	0.029	0.024	0.022	0.558	2.620	0.593	0.033	0.007	0.004	0.005	0.014	0.005
14	0.025	0.025	0.022	0.451	2.759	0.508	0.032	0.006	0.004	0.004	0.014	0.006
15	0.023	0.025	0.022	0.369	2.373	0.437	0.031	0.005	0.004	0.003	0.015	0.006
16	0.023	0.024	0.022	0.470	2.093	0.397	0.030	0.005	0.004	0.005	0.013	0.007
17	0.023	0.024	0.022	0.705	2.020	0.398	0.027	0.005	0.004	0.007	0.009	0.008
18	0.023	0.024	0.020	0.735	2.076	0.365	0.025	0.006	0.004	0.010	0.006	0.008
19	0.024	0.023	0.019	0.697	1.719	0.356	0.023	0.006	0.006	0.010	0.007	0.008
20	0.024	0.023	0.019	0.910	1.489	0.328	0.021	0.005	0.006	0.013	0.009	0.008
21	0.042	0.023	0.019	1.396	1.414	0.278	0.018	0.005	0.007	0.016	0.012	0.026
22	0.045	0.023	0.019	1.602	1.443	0.239	0.018	0.005	0.005	0.016	0.009	0.027
23	0.040	0.023	0.019	1.358	1.481	0.339	0.017	0.004	0.005	0.014	0.006	0.021
24	0.037	0.023	0.019	0.993	1.513	0.326	0.019	0.004	0.005	0.013	0.007	0.019
25	0.036	0.023	0.019	0.779	1.449	0.284	0.022	0.004	0.005	0.012	0.007	0.019
26	0.035	0.022	0.026	0.703	1.449	0.217	0.017	0.003	0.005	0.012	0.006	0.019
27	0.034	0.022	0.036	0.791	1.308	0.212	0.015	0.005	0.004	0.012	0.005	0.018
28	0.033	0.022	0.042	1.095	1.154	0.182	0.015	0.004	0.004	0.012	0.004	0.017
29	0.031	0.057	1.064	1.064	1.087	0.154	0.012	0.005	0.005	0.014	0.003	0.015
30	0.026	0.085	0.914	0.914	1.167	0.126	0.010	0.004	0.006	0.013	0.003	0.015
31	0.026	0.131	1.040	1.040	1.040	0.010	0.010	0.004	0.006	0.016	0.003	0.015
MEAN	0.0311	0.0245	0.0291	0.6551	1.6759	0.5491	0.0378	0.0060	0.0046	0.0099	0.0107	0.0100
INCHES	0.230	0.163	0.215	4.678	12.366	3.921	0.279	0.044	0.033	0.073	0.076	0.074
STA AV	0.176	0.267	0.445	2.495	7.312	3.322	0.289	0.072	0.044	0.075	0.156	0.128

NOTES: To convert CFS to IN/DAY, multiply by 0.238017

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO REYNOLDS MOUNTAIN WATERSHED (166076)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MAY 12 - 13, 1969										
5-12	RG 166X94 0.0	0.148	5-12	1507	0.0	0.0	5-12	655	1.960	0.0
				1519	0.4501	0.09		945	1.920	0.0546
				1533	0.1286	0.12		1200	2.070	0.0992
				1543	0.4800	0.20		1330	2.480	0.1331
				1618	0.0514	0.23		1440	2.490	0.1618
WATERSHED CONDITIONS: For Watershed W-13(166076) runoff event occurred as the result of warmer temperatures and winds combine with rain fall.				1640	0.0818	0.26		1550	3.530	0.1966
				1703	0.1565	0.32		1650	3.880	0.2333
				1736	0.0182	0.33		1815	3.270	0.2835
				1751	0.1200	0.36		2000	2.840	0.3365
								2150	2.610	0.3860
								2400	2.540	0.4413
							5-13	620	2.120	0.5876
								740	2.120	0.6156

NOTES: To convert CFS to IN/HR, multiply by 0.009917.



REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)

LOCATION: Owyhee County, Idaho; 40 miles south of Nampa, Idaho; a tributary to Reynolds Creek, a tributary to the Snake River.

AREA: 33.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)							REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	4.56	0.68	0.45	0.79	0.76	1.88	0.38	0.0	0.31	1.03	0.23	1.26	12.33					
	Q	0.251	0.000	0.244	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.512					
STA AV	P	2.36	0.66	0.35	0.53	0.87	1.28	0.21	1.34	0.24	0.86	1.14	1.40	11.24					
	Q	0.126	0.011	0.152	0.011	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.303					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		1-20	0.015	1-20	0.011	1-20	0.022	1-20	0.060	1-20	0.106	1-20	0.160	1-20	0.192	1-19	0.229		
MAXIMUMS FOR PERIOD OF RECORD																			
		1-21	0.042	1-21	0.029	1-21	0.048	1-21	0.065	1-20	0.106	1-20	0.160	1-20	0.192	1-19	0.229		
		1967		1967		1967		1967		1969		1969		1969		1969		1969	

NOTES: Watershed conditions: Watershed is entirely sagebrush rangeland used almost exclusively for cattle grazing. Vegetation consists of bluebunch wheatgrass, Sandberg bluegrass, cheatgrass, yarrow, and little sagebrush. 90% of the area has a vegetative cover of 0-25% and 10% of the area has a vegetative cover of 26-50%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 68.014-6. Records began: Precipitation-1963; Runoff-1967. Precipitation: 'Computed Actual' amounts from one rain gage. Station average precipitation amounts are based on 1968-69 record period. Station average runoff amounts are based on 1967-69 record period. For long-time precipitation records, see U.S. Weather Bureau records at Boise, Idaho, 50 miles N.E. of watershed.

1969 DAILY AIR TEMPERATURE (degrees F)														REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)											
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	
1	39	35	26	18	38	26	54	35	45	30	68	46	80	54	84	64	83	60	65	41	53	37	46	32	
2	39	34	28	18	38	28	60	39	46	26	69	52	78	51	88	65	83	60	42	32	54	31	39	27	
3	37	32	35	22	31	27	48	34	49	30	78	63	65	46	86	62	61	45	42	31	50	47	42	24	
4	45	36	39	20	37	24	58	34	58	42	85	62	67	46	88	52	68	43	44	30	62	53	34	21	
5	47	41	35	27	40	23	55	47	42	35	80	58	68	49	67	43	67	39	52	31	53	36	30	17	
6	50	42	32	24	29	23	40	33	68	43	74	56	63	47	73	49	73	50	55	38	39	33	24	20	
7	45	17	31	23	27	22	40	32	69	48	76	58	66	47	82	57	80	58	63	52	39	33	25	22	
8	19	13	38	28	27	17	48	38	71	47	68	52	74	53	77	50	83	42	60	36	41	32	26	21	
9	28	16	38	30	23	14	56	36	72	51	65	49	80	65	88	62	79	60	44	32	45	31	24	19	
10	35	28	38	32	22	15	47	31	71	51	67	47	75	54	88	69	70	58	38	31	50	37	25	19	
11	38	28	43	32	33	16	51	30	71	52	55	46	86	69	79	59	74	54	45	37	50	38	36	25	
12	46	28	37	24	33	21	61	36	66	53	70	65	72	54	71	49	72	58	33	25	51	40	39	34	
13	43	38	24	17	35	19	45	29	71	50	65	53	88	51	77	56	72	46	35	23	53	36	46	32	
14	42	30	28	17	40	24	42	30	58	43	68	54	86	56	91	65	59	37	39	26	55	40	49	35	
15	30	21	36	24	47	26	46	26	69	42	71	51	73	53	87	66	67	43	41	26	50	33	35	28	
16	27	21	37	30	47	27	53	29	69	45	63	52	76	55	75	55	72	52	41	33	33	23	41	29	
17	29	21	35	26	44	37	60	35	68	48	71	56	80	59	78	51	74	52	37	33	28	22	42	35	
18	38	23	32	26	39	28	44	28	70	46	61	56	81	58	82	64	72	52	45	30	34	20	42	32	
19	38	30	37	22	39	24	59	35	50	38	59	53	85	63	79	60	60	48	49	33	39	28	41	30	
20	42	33	30	22	39	27	54	26	52	37	71	53	87	67	81	65	54	44	56	38	43	29	35	33	
21	47	33	28	22	45	29	67	40	61	40	70	57	86	63	90	65	57	40	59	37	43	30	48	24	
22	34	15	31	23	50	30	68	48	69	45	61	51	84	59	90	69	65	46	61	37	39	23	33	23	
23	16	6	31	25	35	24	55	31	74	53	57	52	85	63	93	64	67	51	60	41	40	30	30	23	
24	24	8	29	20	41	22	38	25	75	59	53	40	84	57	90	74	65	47	46	44	41	32	30	21	
25	40	22	24	32	50	30	37	25	75	52	51	37	76	56	71	57	72	51	48	34	41	31	34	20	
26	42	20	31	23	57	42	44	22	71	52	52	37	79	51	85	66	74	52	50	29	39	25	26	20	
27	25	17	27	21	55	45	53	30	60	45	49	35	89	64	72	53	78	58	55	33	33	21	19	16	
28	25	14	33	21	59	40	65	43	66	41	52	35	82	67	70	51	70	54	39	33	38	24	18	10	
29	19	8			62	45	44	37	75	50	58	41	85	67	69	43	68	55	34	31	39	25	22	10	
30	22	16			62	42	52	26	66	46	68	44	85	63	71	50	62	47	49	31	42	26	29	17	
31	27	16			54	43			63	39			84	67	78	55			53	38			25	21	
AV.	34	24	39	23	41	27	53	33	64	44	65	50	79	57	80	58	70	50	47	33	44	31	33	23	
MEAN	29.4		31.9		34.5		43.2		54.4		57.8		68.2		69.6		60.1		40.8		37.8		28.7		
STA AV	34	23	39	27	42	28	47	29	60	40	66	48	81	59	78	56	68	50	52	35	42	29	33	21	

NOTES: Temperature data taken from hygrothermograph record at Station 127X07. STA AV based on 3 yr (1967-69) record period.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.04	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
3	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
5	0.0	0.0	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0
6	0.0	0.0	0.01	0.48	0.0	0.16	0.0	0.0	0.0	0.0	0.12	0.0
7	0.07	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.07	0.0	0.0	0.22	0.0	0.0	0.0	0.05	0.0	0.12
9	0.0	0.13	0.05	0.0	0.0	0.10	0.0	0.0	0.13	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.20	0.0	0.03
11	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
12	0.38	0.06	0.0	0.0	0.13	0.04	0.0	0.0	0.0	0.0	0.0	0.05
13	0.38	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.08	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.04	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.03	0.0
17	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0
18	0.02	0.0	0.04	0.21	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.0
19	0.91	0.0	0.0	0.0	0.06	0.21	0.0	0.0	0.02	0.0	0.0	0.16
20	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.09
21	0.91	0.17	0.0	0.0	0.0	0.05	0.0	0.0	0.04	0.0	0.0	0.33
22	0.10	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.04	0.06	0.0	0.07	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.32
24	0.0	0.07	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0
25	0.17	0.05	0.0	0.0	0.0	0.11	0.34	0.0	0.0	0.0	0.0	0.0
26	0.08	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.09
27	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.04	0.0	0.0
28	0.12	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.06	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.56	0.68	0.45	0.79	0.76	1.88	0.38	0.0	0.31	1.03	0.23	1.26
STA AV	2.36	0.66	0.35	0.53	0.87	1.28	0.21	1.34	0.24	0.86	1.14	1.40

NOTES: Values are 'Actual' amounts from a pair of recording gages (shielded and unshielded) 127107. 'Actual' amounts were computed as per relationship developed by W. R. Hanson, "Computing Actual Precipitation", Proceedings of WMO-IDRS Symposium, Geilo, Norway, August, 1972. The equation used is: $\log_e (U/A) = \log_e (U/S) \times 1.80$, where U = unshielded catchment, S = shielded catchment, and A = actual amount of precipitation. STA AV values are based on 2 yr (1968-69) record period.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.04	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
3	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
5	0.0	0.0	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0
6	0.0	0.0	0.01	0.24	0.0	0.16	0.0	0.0	0.0	0.0	0.12	0.0
7	0.06	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.04	0.0	0.0	0.22	0.0	0.0	0.0	0.05	0.0	0.09
9	0.0	0.09	0.03	0.0	0.0	0.10	0.0	0.0	0.13	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.19	0.0	0.02
11	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
12	0.34	0.05	0.0	0.0	0.13	0.04	0.0	0.0	0.0	0.0	0.0	0.04
13	0.34	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.07	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.04	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.03	0.0
17	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0
18	0.02	0.0	0.04	0.08	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.0
19	0.81	0.0	0.0	0.0	0.06	0.21	0.0	0.0	0.02	0.0	0.0	0.16
20	1.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.09
21	0.91	0.05	0.0	0.0	0.0	0.05	0.0	0.0	0.04	0.0	0.0	0.26
22	0.10	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.04	0.02	0.0	0.07	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.10
24	0.0	0.05	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0
25	0.17	0.04	0.0	0.0	0.0	0.10	0.34	0.0	0.0	0.0	0.0	0.0
26	0.08	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.03
27	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.04	0.0	0.0
28	0.08	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.06	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.20	0.40	0.34	0.41	0.76	1.84	0.38	0.0	0.31	1.02	0.23	0.85
STA AV												

NOTES: Values are amounts from unshielded recording gage 127407. STA AV do not apply to unshielded rain gage records.

1969 DAILY PRECIPITATION (inches) REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.04	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
3	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
5	0.0	0.0	0.04	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0
6	0.0	0.0	0.01	0.35	0.0	0.16	0.0	0.0	0.0	0.0	0.12	0.0
7	0.06	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.05	0.0	0.0	0.22	0.0	0.0	0.0	0.05	0.0	0.10
9	0.0	0.11	0.04	0.0	0.0	0.10	0.0	0.0	0.13	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.20	0.0	0.03
11	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
12	0.36	0.06	0.0	0.0	0.13	0.04	0.0	0.0	0.0	0.0	0.0	0.05
13	0.36	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.07	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.04	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.03	0.0
17	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0
18	0.02	0.0	0.04	0.14	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.0
19	0.87	0.0	0.0	0.0	0.06	0.21	0.0	0.0	0.02	0.0	0.0	0.16
20	1.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.09
21	0.91	0.10	0.0	0.0	0.0	0.05	0.0	0.0	0.04	0.0	0.0	0.30
22	0.10	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.04	0.04	0.0	0.07	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.18
24	0.0	0.06	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0
25	0.17	0.04	0.0	0.0	0.0	0.10	0.34	0.0	0.0	0.0	0.0	0.0
26	0.08	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.06
27	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.04	0.0	0.0
28	0.10	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.06	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.38	0.53	0.39	0.59	0.76	1.86	0.38	0.0	0.31	1.03	0.23	1.03
STA AV												

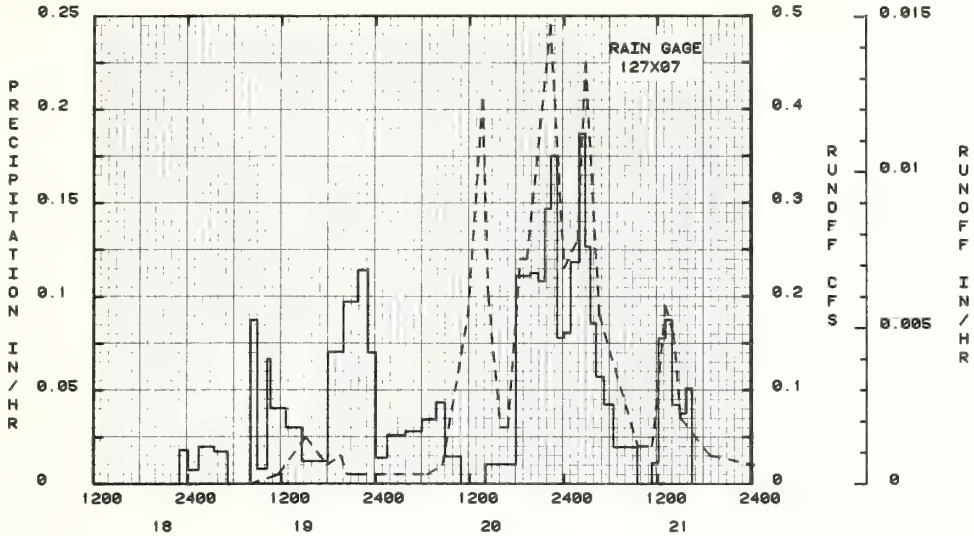
NOTES: Values are amounts from shielded recording gage 127507. STA AV do not apply to shielded rain gage records.

1969 MEAN DAILY DISCHARGE (cfs) REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.038	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.012	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.150	0.0	0.012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.115	0.0	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.011	0.0	0.034	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.005	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.002	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.003	0.0	0.018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.017	0.0	0.033	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.005	0.0	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.003	0.0	0.022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.002	0.0	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.001	0.0	0.016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.001	0.0	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0112	0.0	0.0109	0.0008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCHES	0.251	0.000	0.244	0.017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STA AV	0.126	0.011	0.152	0.011	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0

NOTES: To convert CFS to IN/DAY, multiply by 0.721266. STA AV based on 3 yr (1967-69) record period.

1969 SELECTED RUNOFF EVENT			REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JANUARY 18 - 21, 1969										
EG 127107			EG 127107							
1-18	0.0		1-18	2254	0.0	0.0	1-19	755	0.0	0.0
1-19		0.0		2400	0.0182	0.02		1135	0.010	0.0003
			1-19	121	0.0074	0.03		1505	0.050	0.0031
				321	0.0200	0.07		1745	0.020	0.0060
				505	0.0173	0.10		1930	0.030	0.0075
WATERSHED CONDITIONS: Runoff event followed an earlier event on 1/13/69 which primed the system. The event was the result of a heavy rain that melted the low lying snow.				804	0.0	0.10		2020	0.010	0.0080
				852	0.0875	0.17		2135	0.010	0.0083
				1007	0.0080	0.18		2400	0.010	0.0088
				1034	0.0666	0.21	1-20	225	0.010	0.0095
				1233	0.0403	0.29		635	0.010	0.0110
				1433	0.0300	0.35		830	0.020	0.0119
				1751	0.0121	0.39		1145	0.180	0.0216
				1950	0.0706	0.53		1335	0.410	0.0377
				2141	0.0973	0.71		1420	0.200	0.0446
				2300	0.1139	0.86		1555	0.060	0.0509
			1-20	2400	0.0700	0.93		1650	0.060	0.0526
				127	0.0138	0.95		1825	0.240	0.0597
				345	0.0261	1.01		1915	0.240	0.0656
				554	0.0279	1.07		2215	0.490	0.0982
				739	0.0343	1.13		2400	0.230	0.1169
				848	0.0435	1.18	1-21	145	0.260	0.1297
				1052	0.0145	1.21		245	0.450	0.1404
				1401	0.0	1.21		430	0.180	0.1572
				1751	0.0104	1.25		925	0.040	0.1741
				1845	0.1111	1.35		1115	0.040	0.1764
				1939	0.1111	1.45		1255	0.190	0.1821
				2043	0.1125	1.57		1355	0.160	0.1873
				2133	0.1080	1.66		1445	0.070	0.1902
				2218	0.1467	1.77		1825	0.030	0.1959
				2306	0.1750	1.91		2400	0.020	0.2001
			1-21	2400	0.0778	1.98				
				52	0.0808	2.05				
				158	0.1182	2.18				
				243	0.1867	2.32				
				321	0.1263	2.40				
				403	0.0857	2.46				
				506	0.0571	2.52				
				617	0.0423	2.57				
				922	0.0195	2.63				
				1112	0.0	2.63				
				1205	0.0113	2.64				
				1259	0.0778	2.71				
				1347	0.0875	2.78				
				1444	0.0421	2.82				
				1532	0.0375	2.85				
				1619	0.0511	2.89				

NOTES: To convert CFS to IN/HR, multiply by .030053.



EVENT OF JANUARY 18 - 21, 1969

REYNOLDS, IDAHO LOWER SHEEP CREEK WATERSHED (117066)

CHICKASHA, OKLAHOMA WATERSHED 100 AT ANADARKO

LOCATION: Washita River above Anadarko, Okla.; Southwest Central Oklahoma and Texas Panhandle; in Caddo, Kiowa, Washita, Custer, Beckham, and Roger Mills Counties, Okla.; and Hemphill, Wheeler, and Gray Counties, Tex.; Washita River, Red River Basin. GAGING STATION--NW1/4 sec. 15, T. 7 N., R. 10 W., lat. 35 deg. 05 min., long. 98 deg. 14 min.; North edge of Anadarko, Okla., 35 feet upstream from U.S. Highway 281 bridge over Washita River; at river mile 305.2, approximately 8.1 miles upstream from confluence of Sugar Creek.

AREA: 2339800.00 acres 3656.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED 100 AT ANADARKO													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	Q	0.078	0.036	0.061	0.051	0.696	0.124	0.029	0.063	0.076	0.035	0.030	0.032	1.311					
	Q	0.045	0.044	0.050	0.062	0.156	0.157	0.060	0.046	0.114	0.096	0.099	0.053	0.984					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5-10	0.002	5-10	0.002	5-10	0.005	5-10	0.014	5- 9	0.028	5- 9	0.056	5- 8	0.112	5- 6	0.346		
MAXIMUMS FOR PERIOD OF RECORD																			
		9-23	0.004	9-23	0.004	9-23	0.009	9-23	0.026	9-23	0.052	9-23	0.100	9-23	0.188	9-23	0.384		
		1965		1965		1965		1965		1965		1965		1965		1965			

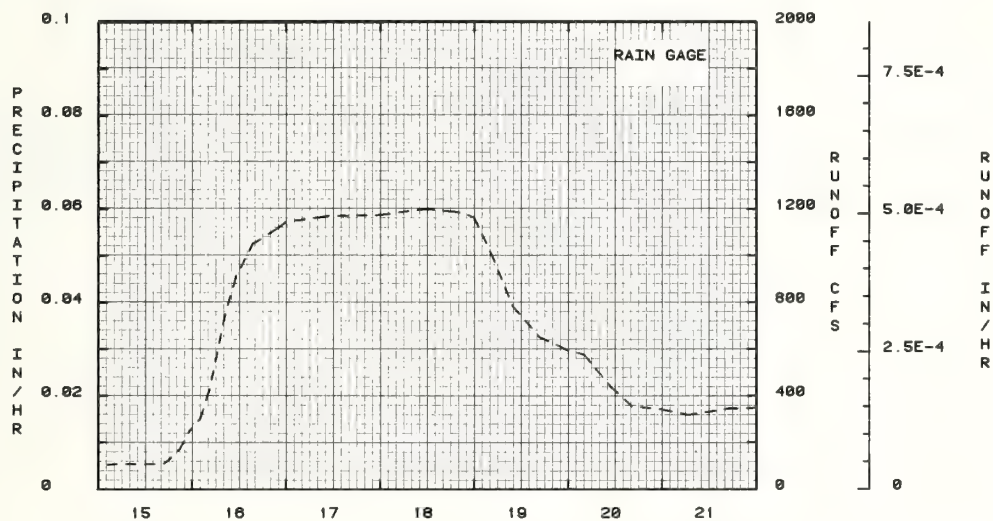
NOTES: Watershed conditions not applicable. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.7-21. Since this is the inflow station to a study reach, precipitation data are not applicable. Runoff records began Oct. 1961. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA WATERSHED 100 AT ANADARKO							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	115.3	109.8	132.4	154.0	173.7	379.2	101.0	62.4	643.6	126.6	104.5	96.7	
2	118.0	109.8	135.4	147.7	147.7	354.6	135.4	84.5	468.9	123.7	104.5	96.7	
3	99.3	109.8	144.5	144.5	178.5	326.2	141.5	96.7	441.5	118.0	104.5	99.3	
4	101.9	107.1	154.0	144.5	208.6	303.4	135.4	107.1	483.7	115.3	104.5	99.3	
5	101.9	107.1	170.3	144.5	1896.0	290.2	126.6	86.9	312.5	112.5	101.9	101.9	
6	104.5	107.1	191.1	150.8	4279.7	281.5	115.3	101.9	264.5	112.5	101.9	104.5	
7	107.1	104.5	205.5	180.6	5069.6	272.9	109.8	96.7	213.0	109.8	104.5	107.1	
8	118.0	101.9	220.5	194.6	5417.1	264.5	101.9	84.5	184.0	112.5	101.9	107.1	
9	118.0	99.3	213.0	173.7	5528.7	252.1	101.9	77.5	163.7	112.5	99.3	107.1	
10	112.5	96.7	187.5	157.2	5226.1	232.1	96.7	68.7	150.8	112.5	99.3	107.1	
11	109.8	96.7	167.0	154.0	2671.9	224.4	94.2	66.6	191.1	109.8	99.3	104.5	
12	109.8	96.7	157.2	157.2	2250.0	220.5	86.9	60.4	213.0	115.3	96.7	104.5	
13	107.1	99.3	154.0	154.0	3557.3	228.2	84.5	60.4	177.1	141.5	96.7	104.5	
14	104.5	112.5	147.7	150.8	4191.1	480.9	82.1	54.6	157.2	120.9	94.2	104.5	
15	128.3	132.4	144.5	150.8	3672.8	1296.0	79.8	56.5	147.7	118.0	94.2	104.5	
16	817.8	138.4	144.5	147.7	3278.9	1787.7	77.5	60.4	177.1	112.5	94.2	104.5	
17	1166.3	150.8	141.5	150.8	2901.0	1039.4	70.9	75.3	154.0	107.1	96.7	101.9	
18	1187.2	154.0	144.5	144.5	2750.1	670.0	68.7	89.3	255.1	104.5	96.7	101.9	
19	794.7	147.7	147.7	213.1	2360.5	543.9	66.6	75.3	402.9	104.5	96.7	101.9	
20	442.7	147.7	147.7	228.2	2327.2	441.5	64.5	62.4	372.6	104.5	96.7	101.9	
21	335.4	144.5	150.8	163.7	2254.3	374.2	64.5	58.4	248.1	104.5	99.3	101.9	
22	240.2	150.8	147.7	147.7	1647.7	277.2	62.4	54.6	220.5	104.5	99.3	101.9	
23	129.5	154.0	167.0	135.4	1124.6	244.0	60.4	54.6	236.1	104.5	104.5	101.9	
24	120.9	167.0	213.0	126.6	861.0	209.2	62.4	56.5	191.1	104.5	99.3	101.9	
25	115.3	160.4	359.6	126.6	744.9	205.5	79.8	163.9	201.9	104.5	99.3	99.3	
26	112.5	150.8	514.6	157.6	676.7	209.2	126.6	135.4	187.5	104.5	101.9	99.3	
27	112.5	147.7	337.1	256.2	892.3	191.1	115.3	104.5	167.0	107.1	101.9	96.7	
28	109.8	135.4	272.9	268.7	703.6	177.1	86.9	850.8	150.8	107.1	99.3	96.7	
29	109.8		224.4	216.7	538.0	170.3	77.5	1440.4	141.5	96.7	101.9	101.9	
30	109.8		187.5	209.2	463.4	199.5	77.5	1324.9	132.4	107.1	99.3	101.9	
31	109.8		167.0		420.2		66.6	854.0		96.7		101.9	
MEAN	247.4	126.4	193.3	168.4	2206.9	404.9	91.0	200.8	248.4	110.8	99.8	102.2	
INCHES	0.078	0.036	0.061	0.051	0.696	0.124	0.029	0.063	0.076	0.035	0.030	0.032	
STA AV	0.045	0.044	0.050	0.062	0.156	0.157	0.060	0.046	0.114	0.096	0.099	0.053	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. To convert discharge in CFS to IN/DAY, multiply by 0.00001017. To convert discharge in inches to AC-FT, multiply by 195,000. STA AV based on 9 yr (1961-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA				WATERSHED 100 AT ANADARKO			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	(inches)	No-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 14 - 21, 1969										
1-14		0.001					1-14	2400	104.50	0.0
							1-15	1	107.10	0.0
								1654	109.80	0.0008
								2048	170.30	0.0010
								2324	250.60	0.0012
WATERSHED CONDITIONS:								2400	262.00	0.0013
Not applicable							1-16	206	305.20	0.0016
								430	431.00	0.0020
								830	752.00	0.0030
								1118	915.10	0.0040
								1530	1050.80	0.0057
								2018	1101.10	0.0079
								2400	1145.40	0.0097
							1-17	1054	1171.00	0.0151
								2400	1175.20	0.0216
							1-18	1124	1200.80	0.0273
								2012	1183.80	0.0317
								2400	1162.40	0.0336
							1-19	418	1009.70	0.0356
								954	780.30	0.0377
								1636	650.20	0.0397
								2400	592.80	0.0416
							1-20	400	574.20	0.0426
								1054	436.20	0.0441
								1612	354.60	0.0450
								2400	340.30	0.0461
							1-21	618	317.00	0.0470
								1642	345.00	0.0485
								2400	349.80	0.0496

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000004239. No precipitation record is shown because all of the watershed lies outside of the area in which precipitation is measured.



EVENT OF JANUARY 14 - 21, 1969
CHICKASHA, OKLAHOMA WATERSHED 100 AT ANADARKO

CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN

LOCATION: Washita River above Verden, Okla.; Southwest Central Okla. and Texas Panhandle; in Caddo, Canadian, Kiowa, Washita, Custer, Beckham, and Roger Mills Counties, Okla.; and Hemphill, Wheeler, and Gray Counties, Tex.; Washita River; Red River Basin. GAGING STATION--SW1/4 sec. 7, T. 7 N., R. 8 W., lat. 35 deg. 05 min., long. 98 deg. 05 min.; North edge of Verden, Okla. at county road bridge over Washita River; at river mile 283.4, approximately 8.4 miles upstream from confluence with Ionine Creek.

AREA: 2612500.00 acres 4082.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.09	1.70	2.27	2.46	6.32	3.37	1.53	3.12	4.43	1.65	0.19	0.72	27.85	
	Q	0.075	0.035	0.064	0.058	0.664	0.138	0.030	0.057	0.075	0.032	0.029	0.030	1.266	
STA AV	P	0.62	1.02	1.33	2.83	3.72	3.69	1.80	2.86	4.75	1.53	1.91	0.99	27.07	
	Q	0.050	0.046	0.050	0.062	0.151	0.156	0.058	0.042	0.108	0.095	0.097	0.055	0.970	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5- 6	0.002	5- 7	0.002	5- 7	0.004	5- 7	0.012	5- 7	0.025	5- 6	0.049	5- 6	0.098

NOTES: Watershed conditions: For area not included above subwatersheds as determined from a 1967 survey: sowed crop - 24%; row crop - 5%; alfalfa - 7%; pasture and range - 49%; and miscellaneous - 15%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.7-21. Precipitation data obtained from a Thiessen weighted average of 66 rain gages for the reach between stations at Anadarko and Verden. Precipitation records began Oct. 1961; runoff records began Sept. 1961. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN	
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.01	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.56	0.0	0.0	0.0	0.0	1.39	0.80	0.0	0.12	0.0	
3	0.0	0.0	0.0	0.04	0.0	1.00	0.0	0.0	0.01	0.16	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	2.85	0.04	0.0	0.29	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.16	0.0	0.11	0.0	0.0	0.0	0.0	0.07	0.0	0.29	
6	0.0	0.0	0.0	0.01	0.0	1.21	0.0	0.01	0.0	0.0	0.22	0.0	0.02	
7	0.0	0.0	0.0	0.05	0.0	0.02	0.0	0.0	0.0	0.03	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.01	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	
11	0.0	0.0	0.0	0.0	0.0	0.30	0.04	0.0	0.0	0.01	0.31	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.01	0.21	0.0	0.0	0.0	0.0	0.30	0.0	0.0	
13	0.0	0.41	0.0	0.06	0.26	2.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.66	0.14	0.0	0.0	0.45	0.0	0.0	0.0	0.04	0.0	0.0	0.0	
15	0.0	0.01	0.03	0.0	0.0	0.01	0.0	0.0	0.37	0.31	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	1.23	0.01	0.0	0.0	0.0	1.71	0.0	0.01	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.01	0.11	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.02	0.0	0.0	
19	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.47	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.01	0.0	0.06	
21	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.05	0.0	0.0	
22	0.0	0.0	0.29	0.0	0.0	0.0	0.0	0.55	0.49	0.71	0.04	0.0	0.0	
23	0.0	0.09	0.99	0.04	0.0	0.0	0.01	0.0	0.02	0.0	0.14	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.18	0.57	0.82	0.46	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	1.12	0.0	0.0	0.14	0.04	0.0	0.0	0.06	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.04	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.16	
29	0.08	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.17	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.01	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL		0.09	1.70	2.27	2.46	6.32	3.37	1.53	3.12	4.43	1.65	0.19	0.72	
STA AV		0.62	1.02	1.33	2.83	3.72	3.69	1.80	2.86	4.75	1.53	1.91	0.99	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Daily precipitation values Thiessen weighted average of 66 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969		MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA			WATERSHED 200 AT VERDEN			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	195.7	129.3	130.8	214.8	269.5	526.9	220.1	77.9	741.9	135.5	101.8	100.6	
2	147.9	127.8	132.4	199.2	220.1	488.5	113.4	104.2	629.3	130.2	107.7	98.4	
3	137.0	118.8	168.9	190.6	204.0	450.9	149.1	153.4	520.0	123.7	111.3	98.4	
4	115.9	111.5	190.6	180.5	1146.8	424.9	146.3	125.0	516.9	119.9	110.1	100.6	
5	135.4	111.5	167.2	172.2	2921.7	399.4	139.5	121.2	366.4	118.7	110.1	100.6	
6	135.4	104.3	214.8	168.9	4112.0	376.4	132.8	108.9	299.9	122.4	107.7	107.7	
7	115.9	101.4	232.6	177.1	5421.3	349.7	127.6	125.0	236.2	121.2	107.7	108.9	
8	110.0	97.8	239.9	202.6	5350.7	325.6	121.2	104.1	202.1	116.2	107.7	108.9	
9	107.1	94.4	252.7	200.9	5288.1	305.9	114.9	92.7	156.2	114.9	105.3	110.1	
10	110.0	91.6	230.8	168.9	5249.0	292.3	111.3	85.2	140.8	116.2	107.7	112.5	
11	114.4	90.3	220.1	154.3	3384.1	260.1	106.5	77.9	149.7	114.9	107.7	113.7	
12	118.8	86.9	182.1	149.5	2155.3	250.9	99.5	75.9	218.3	123.7	104.1	112.5	
13	117.3	86.9	178.8	152.7	2942.4	252.4	95.0	71.9	194.7	136.8	104.1	112.5	
14	115.9	129.3	172.2	154.3	4090.5	923.1	93.9	66.2	166.4	140.8	101.8	110.1	
15	115.9	194.0	172.2	151.1	3940.4	1138.0	90.5	62.5	151.9	126.3	101.8	106.5	
16	450.9	172.2	175.5	188.7	3464.9	1865.8	86.2	65.3	301.2	116.2	99.5	106.5	
17	1040.6	165.6	164.0	413.0	2847.8	1409.6	84.1	71.0	240.1	110.1	103.0	106.5	
18	1087.3	162.3	159.1	207.8	2934.1	916.0	79.9	78.9	193.9	107.7	101.8	105.3	
19	957.9	162.3	154.3	183.0	2439.8	696.2	78.9	90.5	365.7	106.5	100.6	106.5	
20	632.0	165.6	149.5	298.9	2269.1	568.5	75.9	79.9	429.1	103.0	101.8	104.1	
21	410.7	188.9	152.7	178.8	2281.7	488.5	72.9	69.0	300.5	100.6	104.1	107.7	
22	380.5	173.8	146.3	178.8	1856.3	384.7	70.0	64.3	259.1	103.0	105.3	106.5	
23	222.2	167.2	236.0	155.9	1350.4	315.7	70.0	63.4	249.8	107.7	105.3	104.1	
24	167.2	178.8	330.8	143.2	1052.9	260.1	70.0	64.3	221.5	108.9	107.7	103.0	
25	155.9	175.5	307.7	137.0	937.4	240.1	72.9	108.3	166.4	107.7	104.1	101.8	
26	147.9	164.0	564.2	220.9	894.4	315.4	132.1	169.2	176.9	104.1	103.0	100.6	
27	140.1	152.7	462.6	443.7	940.0	243.5	142.2	144.2	175.4	101.8	106.5	98.4	
28	127.8	140.1	335.6	357.9	938.2	230.8	119.9	177.1	173.9	104.1	104.1	98.4	
29	121.8		278.9	347.7	736.2	221.9	97.2	1055.1	159.1	107.7	101.8	105.3	
30	117.3		245.4	296.2	635.1	239.1	91.6	1533.3	147.7	105.3	103.0	106.5	
31	129.3		227.3		580.3		87.3	952.3		106.5		107.7	
MEAN	263.9	137.4	225.7	213.0	2350.1	505.4	106.2	201.2	275.0	114.9	104.9	105.5	
INCHES	0.075	0.035	0.064	0.058	0.664	0.138	0.030	0.057	0.075	0.032	0.029	0.030	
STA 1V	0.050	0.046	0.050	0.062	0.151	0.156	0.058	0.042	0.108	0.095	0.097	0.055	

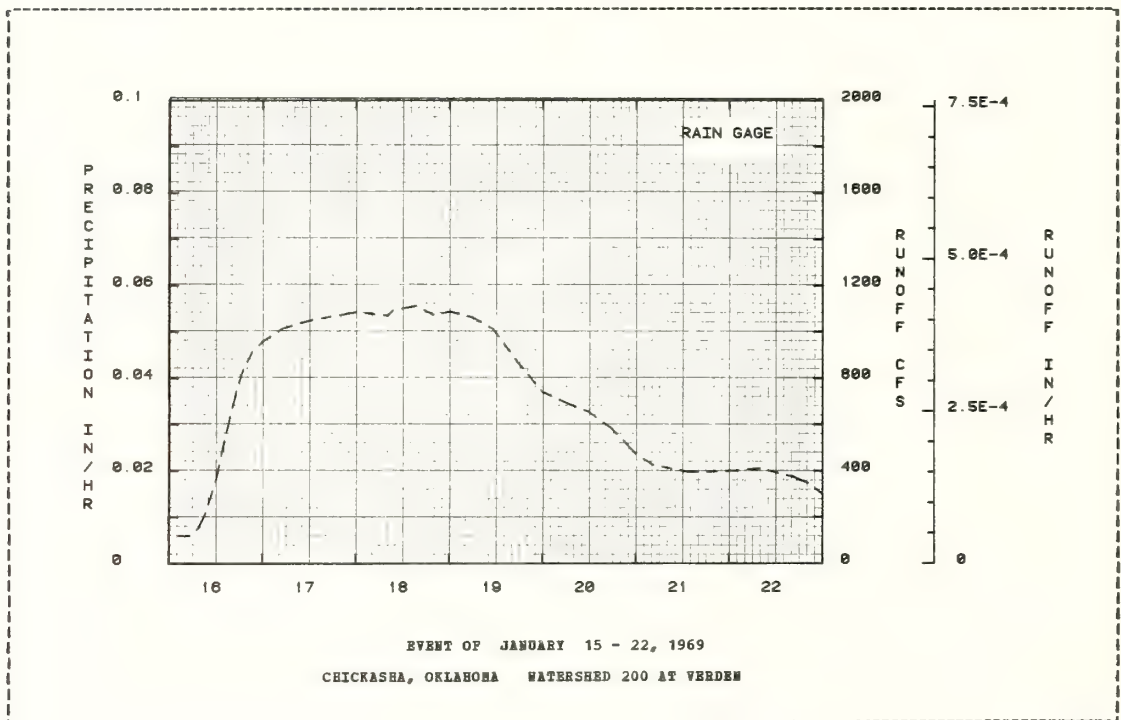
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000009111. To convert discharge in inches to AC-FT, multiply by 217,700. STA AV based on 9 yr (1961-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF JANUARY 15 - 22, 1969											
1-15	0.001						1-15	2400	115.90	0.0	
							1-16	1	118.70	0.0	
								524	121.60	0.0002	
								742	154.00	0.0003	
								930	218.90	0.0004	
WATERSHED CONDITIONS: For area not included above subwatersheds as determined from a 1967 survey; sowed crop - 24%; row crop - 5%; alfalfa - 7%; pasture and range - 49%; and miscel- laneous - 15%.								1118	314.50	0.0006	
								1230	385.90	0.0008	
								1342	489.00	0.0010	
								1512	597.00	0.0013	
								1718	743.30	0.0018	
								1906	837.10	0.0023	
								2124	915.20	0.0031	
								2400	958.30	0.0040	
								1-17	512	1015.60	0.0059
								1248	1053.40	0.0089	
								2400	1086.00	0.0134	
								1-18	806	1068.60	0.0167
								930	1093.20	0.0173	
								1524	1112.90	0.0198	
								1942	1074.20	0.0216	
								2400	1086.90	0.0234	
	1-19	600	1060.70	0.0258							
	1112	1011.20	0.0278								
	1724	872.90	0.0300								
	2206	777.60	0.0315								
	2400	739.90	0.0320								
	1-20	618	690.80	0.0337							
	1142	655.20	0.0351								
	1718	586.60	0.0364								
	2054	526.20	0.0372								
	2400	471.80	0.0378								
	1-21	424	424.10	0.0385							
	1336	393.70	0.0399								
	2400	399.40	0.0415								
	1-22	754	410.20	0.0427							

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003796. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 15 - 22, 1969 (CONTINUED)										
							1-22	1606	374.90	0.0439
								2012	348.70	0.0445
								2400	299.90	0.0450

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003796. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA				WATERSHED 200 AT VERDEN			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 3 - 24, 1969										
5- 3		0.002					5- 3	2400	231.00	0.0
							5- 4	248	263.20	0.0003
								418	315.60	0.0005
								518	383.20	0.0006
								642	448.00	0.0008
WATERSHED CONDITIONS: For area not included above subwatersheds as determined from a 1967 survey; sowed crop - 24%; row crop - 5%; alfalfa - 7%; pasture and range - 49%; and miscel- laneous - 15%.								812	478.50	0.0011
								1000	494.90	0.0014
								1306	465.60	0.0020
								1606	434.80	0.0025
								1636	554.40	0.0026
								1648	749.50	0.0026
								1654	1009.40	0.0026
								1700	1325.90	0.0026
								1712	1429.60	0.0027
								1730	1544.30	0.0029
								1736	2158.00	0.0030
								1748	2214.80	0.0032
								1800	2408.20	0.0034
								1806	2708.60	0.0035
								1812	2817.50	0.0036
								1830	2857.20	0.0039
								1842	3380.80	0.0041
								1854	3423.00	0.0044
								1918	3437.00	0.0049
								1954	3336.20	0.0057
								2112	3286.60	0.0073
								2224	2906.60	0.0087
								2306	2817.90	0.0095
								2400	2852.90	0.0105
5- 5	36	2949.20	0.0112							
	130	3052.40	0.0122							
	236	3036.80	0.0135							
	312	3137.80	0.0142							
	354	3243.80	0.0150							
	512	3399.60	0.0166							
	624	3475.30	0.0182							
	730	3437.90	0.0196							
	836	3310.20	0.0210							
	924	3239.70	0.0220							
	1024	3140.40	0.0232							
	1124	3027.00	0.0244							
	1212	2912.00	0.0253							
	1312	2736.90	0.0264							
	1406	2649.00	0.0273							
	1506	2512.70	0.0283							
	1548	2435.80	0.0290							
	1642	2372.60	0.0298							
	1800	2435.00	0.0310							
	1954	2567.60	0.0328							
	2136	2731.40	0.0345							
	2236	2866.50	0.0356							
	2400	3008.60	0.0372							
5- 6	136	3229.30	0.0391							
	230	3368.60	0.0402							
	412	3479.90	0.0424							
	606	3617.20	0.0450							
	806	3739.70	0.0478							
	1036	3890.30	0.0514							
	1248	4013.80	0.0547							
	1430	4128.79	0.0573							
	1636	4310.98	0.0607							
	1742	4496.88	0.0625							
	1854	4763.38	0.0646							
	1930	4955.29	0.0657							
	2042	5066.59	0.0680							
	2148	5221.88	0.0701							
	2300	5465.59	0.0725							
	2400	5320.09	0.0745							
5- 7	224	5420.79	0.0794							
	600	5431.68	0.0868							
	1242	5454.18	0.1006							
	1742	5409.09	0.1109							
	2400	5404.59	0.1233							
5- 8	1	5350.68	0.1238							
	2400	5350.68	0.1725							

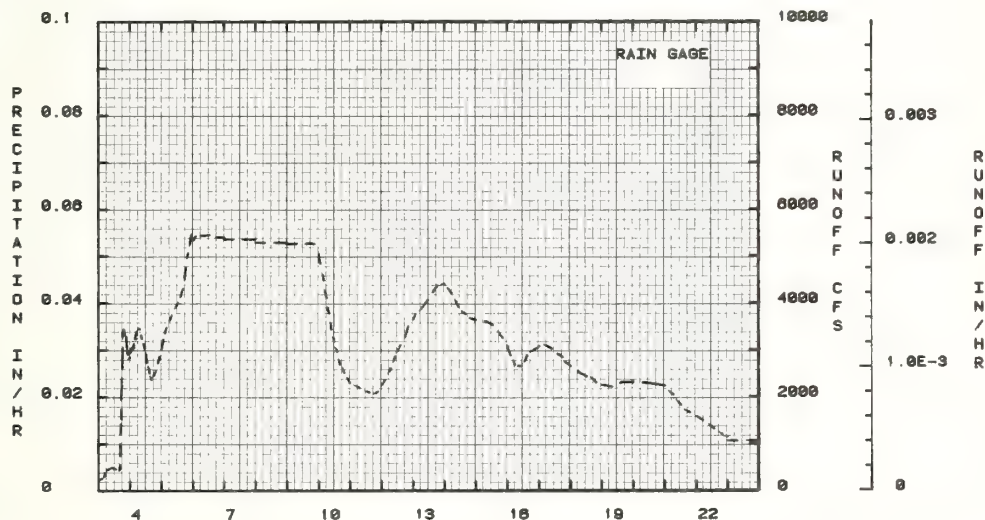
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003796. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MAY 3 - 24, 1969 (CONTINUED)										
							5- 8	1	5288.09	0.1725
								2400	5288.09	0.2206
							5-10	1	5252.29	0.2206
								1606	5270.18	0.2527
								2100	5252.29	0.2625
								2400	5074.18	0.2684
							5-11	142	4831.98	0.2716
								306	4637.29	0.2741
								406	4484.29	0.2758
								512	4222.18	0.2776
								612	4106.69	0.2792
								706	3876.30	0.2806
								800	3777.50	0.2819
								900	3595.60	0.2833
								1000	3431.70	0.2846
								1100	3278.40	0.2859
								1206	3185.00	0.2872
								1300	3054.10	0.2883
								1412	2958.40	0.2897
								1524	2806.90	0.2910
								1630	2687.60	0.2921
								1742	2627.60	0.2933
								1924	2506.90	0.2950
								2136	2408.70	0.2971
								2400	2301.20	0.2992
							5-12	318	2249.30	0.3021
								712	2184.40	0.3054
								1118	2126.20	0.3088
								1448	2084.50	0.3116
								1754	2054.20	0.3140
								2100	2103.90	0.3164
								2400	2234.20	0.3189
							5-13	230	2357.30	0.3211
								506	2499.30	0.3235
								706	2612.50	0.3254
								854	2735.40	0.3272
								1024	2861.10	0.3288
								1130	2944.50	0.3300
								1412	3104.30	0.3331
								1800	3285.30	0.3377
								2030	3497.10	0.3409
								2400	3626.50	0.3456
							5-14	154	3757.90	0.3483
								506	3833.30	0.3529
								1106	4059.90	0.3619
								1554	4263.29	0.3695
								1842	4375.09	0.3741
								2154	4392.38	0.3794
								2400	4401.29	0.3829
							5-15	236	4310.68	0.3872
								524	4198.98	0.3917
								824	4065.80	0.3964
								1106	3911.50	0.4005
								1318	3809.30	0.4037
								1624	3763.00	0.4082
								1924	3669.20	0.4124
								2400	3629.30	0.4188
							5-16	818	3600.90	0.4302
								1306	3516.40	0.4367
								1700	3382.20	0.4418
								2012	3251.10	0.4458
								2400	3067.50	0.4504
							5-17	230	2875.20	0.4532
								430	2773.90	0.4553
								548	2669.20	0.4566
								818	2652.50	0.4591
								1024	2659.10	0.4612
								1306	2746.50	0.4640
								1500	2875.20	0.4660
								1800	2961.30	0.4693
								2400	3075.20	0.4762
							5-18	400	3112.60	0.4809
								942	3016.50	0.4875
								1412	2909.60	0.4926
								1754	2838.10	0.4966

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003796. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate	Acc.	
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	No-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 3 - 24, 1969 (CONTINUED)										
						5-18	1930	2747.80	0.4983	
							2400	2647.90	0.5029	
						5-19	600	2522.00	0.5088	
							1224	2431.30	0.5148	
							1530	2418.40	0.5177	
							1936	2298.30	0.5214	
							2400	2251.00	0.5252	
						5-20	742	2205.50	0.5317	
							1506	2304.60	0.5380	
							2400	2327.80	0.5458	
						5-21	1312	2280.00	0.5573	
							2400	2229.10	0.5665	
						5-22	312	2119.00	0.5691	
							630	2034.80	0.5717	
							906	1928.40	0.5737	
							1206	1821.60	0.5758	
							1500	1715.60	0.5777	
							1906	1654.70	0.5803	
							2400	1579.90	0.5833	
						5-23	448	1499.40	0.5861	
							936	1407.90	0.5887	
							1324	1313.30	0.5907	
							1718	1242.30	0.5926	
							1924	1191.70	0.5936	
							2106	1157.00	0.5944	
							2400	1143.00	0.5957	
						5-24	1	1052.90	0.5957	
							2400	1052.90	0.6053	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003796. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



EVENT OF MAY 3 - 24, 1969
CHICKASHA, OKLAHOMA WATERSHED 200 AT VERDEN

CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA

LOCATION: Washita River Watershed above Chickasha, Okla.; Southwest Central Oklahoma and Texas Panhandle; in Grady, Caddo, Canadian, Kiowa, Washita, Custer, Beckham, and Roger Mills Counties, Okla.; and Hemphill, Wheeler, and Gray Counties, Tex.; Washita River, Red River Basin. GAGING STATION--SE1/4 sec. 23, T. 7 N., R. 7 W., lat. 35 deg. 05 min.; long. 97 deg. 54 min., 1 mile Northeast of Chickasha, Okla., at H.E. Bailey Turnpike bridge over Washita River; at river mile 256.5, approximately 1.3 miles downstream from confluence of Line Creek.

AREA: 2768000.00 acres 4325.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.23	2.09	2.10	2.72	5.41	3.25	1.26	2.63	4.45	1.47	0.17	0.93	26.71	
	Q	0.070	0.035	0.056	0.068	0.672	0.137	0.028	0.044	0.079	0.031	0.027	0.029	1.276	
STA AV	P	0.76	1.13	1.40	2.88	3.47	3.22	1.73	3.07	3.84	1.45	2.20	0.89	26.02	
	Q	0.041	0.038	0.044	0.070	0.170	0.105	0.052	0.043	0.091	0.088	0.080	0.049	0.874	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval							
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5- 7	0.002	5- 7	0.002	5- 7	0.005	5- 7	0.014	5- 7	0.029	5- 6	0.055	5- 6	0.102
MAXIMUMS FOR PERIOD OF RECORD															
		4-12	0.003	5- 7	0.002	4-12	0.005	4-12	0.015	5- 7	0.029	5- 6	0.055	5- 6	0.102
		1967		1969		1967		1967		1969		1969		1969	

NOTES: Watershed conditions: For area not included above subwatersheds as determined from a 1967 survey; sowed crop - 33%; row crop - 4%; alfalfa - 7%; pasture and range - 45%; and miscellaneous - 11%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.7-21, (Composite). The station at Chickasha (4th St.) Watershed 400 was discontinued in 1967, therefore, causing a new Thiessen weighted average for this watershed. Precipitation data obtained from a Thiessen weighted average of 42 gages for the reach between Verden (200) and Chickasha (500). Precipitation records began Oct. 1961; runoff records began Jan. 1964. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)														CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA	
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.51	0.0	0.0	0.0	0.0	0.96	0.81	0.0	0.04	0.0		
3	0.0	0.0	0.0	0.04	0.0	1.27	0.0	0.0	0.02	0.16	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	1.38	0.0	0.0	0.20	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.0	0.12	0.0	0.24	0.0	0.0	0.0	0.0	0.12	0.0	0.39		
6	0.0	0.0	0.0	0.01	0.0	1.66	0.0	0.0	0.0	0.0	0.21	0.0	0.03		
7	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.04	0.07	0.0	0.0		
12	0.0	0.0	0.0	0.0	0.03	0.36	0.0	0.0	0.0	0.0	0.35	0.0	0.0		
13	0.0	0.42	0.0	0.07	0.09	0.09	1.26	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.86	0.12	0.0	0.0	0.0	0.96	0.0	0.0	0.09	0.0	0.0	0.0		
15	0.0	0.01	0.02	0.0	0.0	0.0	0.0	0.0	0.47	0.01	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	1.43	0.16	0.0	0.0	0.0	1.75	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.01	0.0	0.0		
19	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.53	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.01	0.0	0.07		
21	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.69	0.04	0.0	0.0		
22	0.0	0.0	0.33	0.0	0.0	0.0	0.29	0.36	0.90	0.04	0.0	0.0	0.0		
23	0.0	0.13	0.90	0.18	0.0	0.02	0.0	0.06	0.0	0.25	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.02	0.67	0.72	0.50	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	1.01	0.0	0.0	0.15	0.03	0.0	0.0	0.13	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.03	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19		
29	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.23		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02		
31	0.03	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL		0.23	2.09	2.10	2.72	5.41	3.25	1.26	2.63	4.45	1.47	0.17	0.93		
STA AV		0.76	1.13	1.40	2.88	3.47	3.22	1.73	3.07	3.84	1.45	2.20	0.89		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69-007) of this publication. Daily precipitation values Thiessen weighted average of 42 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969					CHICKASHA, OKLAHOMA							
BRAN DAILY DISCHARGE (cfs)					WATERSHED 500 NEAR CHICKASHA							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	199.8	128.5	146.1	202.6	250.0	489.1	220.6	76.1	794.9	143.5	107.2	103.8
2	205.0	127.2	146.1	193.9	219.0	464.5	165.1	85.5	660.8	132.2	102.6	101.5
3	176.9	126.0	150.0	182.5	193.9	440.3	126.3	139.8	573.7	127.2	108.3	101.5
4	135.9	121.2	168.6	175.5	877.8	407.0	147.4	124.9	464.5	120.0	111.8	101.5
5	135.9	116.4	183.9	170.0	4296.0	378.5	142.2	117.6	454.8	117.6	110.6	104.9
6	144.8	115.3	182.5	164.5	3951.0	359.9	138.4	101.5	309.9	117.6	110.6	110.6
7	138.4	114.1	202.6	161.8	6398.9	343.5	135.9	92.7	264.2	117.6	108.3	108.3
8	129.7	112.9	217.4	172.7	5425.3	327.4	129.7	100.4	220.5	117.6	108.3	110.6
9	135.9	112.9	217.4	188.1	5301.5	311.6	121.2	85.3	185.3	114.1	107.2	111.8
10	133.4	111.8	229.6	178.3	5312.5	301.3	118.8	77.1	163.2	112.9	104.9	111.8
11	135.9	111.8	207.0	159.2	4870.7	287.7	112.9	75.1	153.9	111.8	104.9	112.9
12	133.4	109.5	188.1	151.3	2673.0	267.8	107.2	65.5	166.2	119.3	104.9	114.1
13	132.2	111.8	174.1	149.9	2606.7	276.0	99.3	64.5	210.0	120.0	103.8	114.1
14	128.5	132.2	168.6	149.9	3770.1	1012.1	94.9	60.9	175.5	133.4	102.6	111.8
15	127.2	150.0	164.5	149.9	4324.9	1091.1	92.7	58.1	159.2	132.2	103.8	111.8
16	130.9	172.7	165.9	152.0	3890.0	1587.9	87.4	47.8	362.8	122.4	104.9	108.3
17	797.4	164.5	171.3	1199.3	3349.1	1656.0	83.2	53.7	435.8	112.9	103.8	108.3
18	1087.9	163.2	167.3	409.3	3156.3	1083.4	81.2	65.5	208.0	108.3	102.6	109.5
19	1098.3	164.5	164.5	228.2	2714.0	810.9	78.1	72.2	223.8	106.0	101.5	108.3
20	703.8	179.7	161.8	224.9	2319.2	670.9	73.2	80.2	403.7	104.9	102.6	109.5
21	425.4	182.5	152.6	268.4	2272.7	547.6	75.1	68.3	415.4	103.8	102.6	109.5
22	328.1	185.3	153.9	210.0	2034.7	448.3	69.3	64.5	298.3	102.6	104.9	111.8
23	266.9	176.9	192.3	183.9	1488.9	336.3	83.6	64.5	409.6	109.5	103.8	108.3
24	167.2	174.1	295.5	164.5	1092.0	284.3	65.5	60.9	299.1	109.5	103.8	107.2
25	150.0	182.5	262.3	151.3	914.8	235.8	68.3	63.6	231.9	109.5	103.8	107.2
26	147.4	181.1	336.0	162.3	819.2	505.4	79.2	116.0	186.7	107.2	101.5	104.9
27	142.2	168.6	482.5	986.4	781.9	337.7	133.7	143.5	193.9	103.8	102.6	104.9
28	135.9	157.8	360.1	415.1	907.0	258.0	121.2	123.6	183.9	102.6	102.6	103.8
29	135.9		281.0	334.5	742.9	228.1	97.1	404.0	167.3	109.5	101.5	107.2
30	130.9		248.4	282.7	615.2	212.9	85.3	1272.1	156.5	110.6	101.5	106.0
31	130.9		222.0		539.9		80.2	1093.6		107.2		101.5
BRAN	263.6	144.8	211.7	264.1	2519.6	532.0	106.9	165.1	304.4	115.1	104.8	108.0
INCHES	0.070	0.035	0.056	0.068	0.672	0.137	0.028	0.044	0.079	0.031	0.027	0.029
STA AV	0.041	0.038	0.044	0.070	0.170	0.105	0.052	0.043	0.091	0.088	0.080	0.049

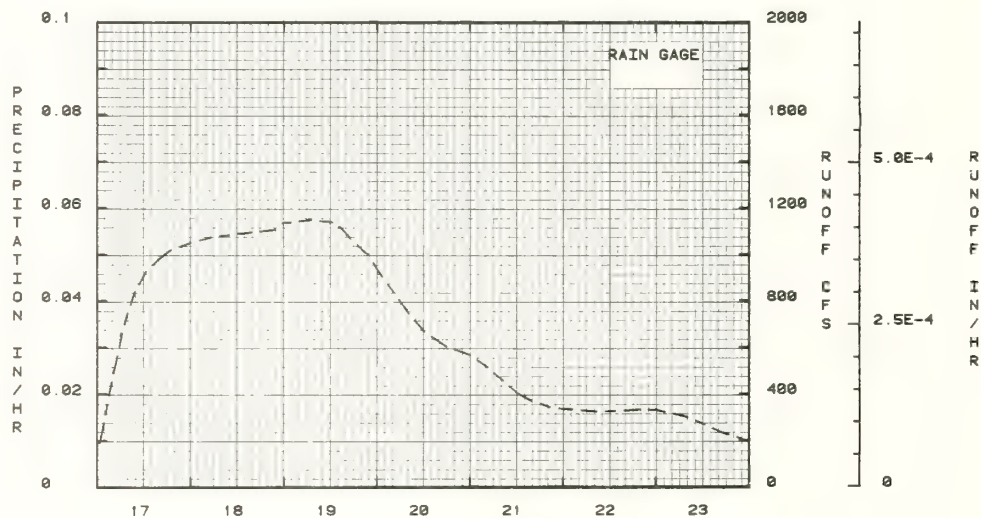
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000008599. To convert discharge in inches to AC-FT, multiply by 230,667. STA AV based on 6 yr (1964-69) record period.

1969			SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 500 NEAR CHICKASHA		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF JANUARY 16 - 23, 1969											
1-16		0.001					1-16	2400	130.90	0.0	
							1-17	1	153.00	0.0	
								54	212.60	0.0001	
								142	274.80	0.0002	
								230	356.60	0.0003	
WATERSHED CONDITIONS:											
For area not included above											
subwatersheds as determined											
from a 1967 survey; sowed											
crop - 33%; row crop - 4%;											
alfalfa - 7%; pasture and											
range - 45%; and miscel-											
laneous - 11%.											
								336	450.60	0.0005	
								506	565.30	0.0008	
								618	663.00	0.0011	
								742	746.40	0.0015	
								936	838.80	0.0020	
								1230	926.80	0.0029	
								1530	976.80	0.0039	
								1854	1020.30	0.0051	
								2400	1050.70	0.0070	
							1-18	506	1074.40	0.0089	
								1306	1090.50	0.0120	
								2154	1107.90	0.0155	
								2400	1138.10	0.0163	
							1-19	142	1138.70	0.0170	
								700	1149.50	0.0192	
								1224	1138.20	0.0214	
								1454	1112.00	0.0224	
								1712	1067.10	0.0233	
								2148	994.70	0.0250	
								2400	934.10	0.0258	
								418	834.90	0.0272	
								812	745.70	0.0283	
								1212	667.10	0.0293	
								1748	603.00	0.0306	
								2400	566.30	0.0319	
								430	515.10	0.0328	
								830	456.80	0.0335	
								1206	404.10	0.0341	
								1554	368.20	0.0346	
								2036	341.20	0.0352	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003583. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 16 - 23, 1969 (CONTINUED)										
							1-21	2400	334.70	0.0356
							1-22	842	322.30	0.0366
								1948	331.50	0.0379
								2400	329.50	0.0384
							1-23	812	298.40	0.0393
								1630	236.00	0.0401
								2400	194.40	0.0407

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000003583. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



EVENT OF JANUARY 16 - 23, 1969
CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 3 - 23, 1969										
5- 3		0.002					5- 3	2400	221.30	0.0
							5- 4	200	210.70	0.0002
								248	233.70	0.0003
								318	282.50	0.0003
								330	350.60	0.0003
WATERSHED CONDITIONS: For area not included above subwatersheds as determined from a 1967 survey; sowed crop - 33%; row crop - 4%; alfalfa - 7%; pasture and range - 45%; and miscel- laneous - 11%.								348	376.50	0.0003
								400	488.40	0.0003
								418	540.80	0.0004
								436	642.90	0.0005
								500	716.40	0.0006
								518	826.50	0.0007
								536	885.60	0.0008
								600	955.30	0.0009
								624	1040.00	0.0010
								642	1111.50	0.0011
				724	1153.40	0.0014				
				818	1200.20	0.0018				
				1024	1250.60	0.0027				
				1224	1136.00	0.0036				
				1336	1054.10	0.0041				
				1500	1015.50	0.0046				
				1742	935.20	0.0055				
				2024	890.20	0.0064				
				2400	896.50	0.0076				
			5- 5	130	972.60	0.0081				
				218	1061.60	0.0084				
				318	1272.40	0.0088				
				330	1690.00	0.0089				
				342	1814.20	0.0090				
				348	2100.10	0.0091				
				400	2078.30	0.0092				
				412	2189.30	0.0094				
				424	2444.70	0.0096				
				442	2624.80	0.0099				
				500	2782.40	0.0102				
				518	3123.60	0.0105				
				524	3247.30	0.0106				
				536	3414.10	0.0108				
				548	3414.10	0.0110				
				600	3377.00	0.0112				
				606	3600.00	0.0113				
				612	3900.80	0.0114				
				618	4100.89	0.0115				
				630	4400.88	0.0118				
				648	4495.29	0.0123				
				712	4873.18	0.0130				
				736	4928.18	0.0137				
				806	5177.38	0.0146				
				830	5466.48	0.0154				
				912	5367.68	0.0168				
				948	5584.29	0.0180				
				1024	5631.09	0.0192				
				1112	5743.18	0.0208				
				1154	5778.38	0.0222				
				1254	5815.68	0.0243				
				1430	5894.79	0.0277				
				1518	5783.88	0.0294				
				1600	5612.29	0.0308				
				1636	5503.38	0.0320				
				1724	5433.29	0.0336				
				1818	5263.09	0.0353				
				1854	4894.68	0.0364				
				1954	4866.98	0.0381				
				2042	4579.29	0.0395				
				2136	4431.09	0.0410				
				2224	4180.48	0.0422				
				2306	3980.00	0.0432				
				2400	3872.80	0.0445				
			5- 6	48	3706.90	0.0456				
				224	3496.10	0.0477				
				418	3325.10	0.0500				
				530	3317.10	0.0514				
				636	3326.70	0.0527				
				836	3382.60	0.0551				
				1106	3466.90	0.0582				

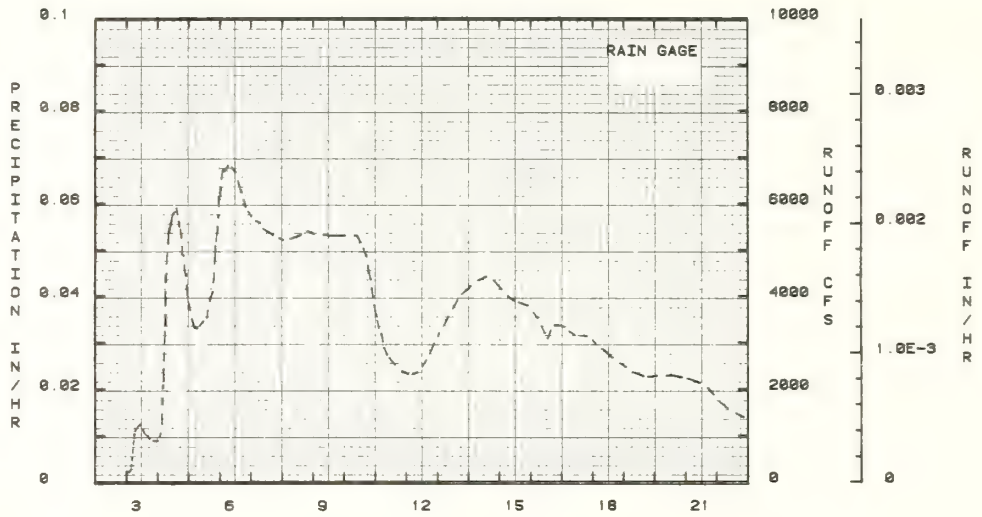
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003583. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 500 NEAR CHICKASHA		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF MAY 3 - 23, 1969 (CONTINUED)								
							5- 6	1348
								1442
								1618
								1836
								1930
								2000
								2030
								2106
								2136
								2200
								2230
								2248
								2318
								2400
							5- 7	36
								112
								154
								300
								600
								818
								1136
								1406
								1548
								1812
								1942
								2130
								2400
							5- 8	300
								618
								912
								1548
								2054
								2400
							5- 9	618
								1354
								1842
								2400
							5-10	1212
								2400
							5-11	848
								1148
								1412
								1554
								1742
								1912
								2006
								2112
								2206
								2312
								2400
							5-12	112
								254
								418
								524
								730
								918
								1354
								1942
								2400
							5-13	318
								712
								1106
								1354
								1718
								2006
								2330
								2400
							5-14	400
								706
								1118
								1406
								1748
								2400
							5-15	554
								1218

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003583. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969	SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 500 NEAR CHICKASHA				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 3 - 23, 1969 (CONTINUED)											
							5-15	1806	4336.48	0.4199	
								2400	4145.48	0.4289	
							5-16	500	3991.60	0.4362	
								900	3907.10	0.4419	
								1312	3867.20	0.4477	
								1942	3789.70	0.4566	
								2400	3655.90	0.4623	
							5-17	306	3531.20	0.4663	
								606	3357.40	0.4700	
								854	3202.40	0.4733	
								1118	3085.60	0.4760	
								1336	3259.90	0.4786	
								1618	3369.90	0.4818	
								1848	3386.20	0.4848	
								2036	3374.70	0.4870	
								2400	3330.50	0.4911	
							5-18	336	3239.60	0.4953	
								754	3164.80	0.5002	
								1206	3145.30	0.5049	
								1706	3136.70	0.5105	
								2206	3049.20	0.5160	
								2400	2987.40	0.5181	
							5-19	636	2830.10	0.5250	
								1336	2667.90	0.5319	
								1918	2554.40	0.5372	
								2400	2471.80	0.5414	
							5-20	530	2361.60	0.5462	
								1312	2273.90	0.5526	
								1654	2258.30	0.5556	
								2400	2287.60	0.5614	
							5-21	1000	2296.70	0.5696	
								1906	2246.20	0.5770	
								2400	2224.70	0.5809	
							5-22	830	2133.10	0.5875	
								1524	2001.00	0.5926	
								1918	1879.30	0.5953	
								2400	1730.10	0.5983	
							5-23	612	1576.60	0.6020	
								1206	1478.80	0.6052	
								1824	1387.60	0.6084	
								2400	1269.80	0.6111	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003583. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



EVENT OF MAY 3 - 23, 1969
 CHICKASHA, OKLAHOMA WATERSHED 500 NEAR CHICKASHA

CHICKASHA, OKLAHOMA WATERSHED 600 NEAR TABLER

LOCATION: Washita River Watershed above Tabler, Okla.; Southwest Central Oklahoma and Texas Panhandle; in Grady, Caddo, Canadian, Kiowa, Washita, Custer, Beckham, and Roger Mills Counties, Okla.; and Hemphill, Wheeler, and Gray Counties, Tex.; Washita River, Red River Basin. GAGING STATION—#11/4 sec. 23, T. 6 N., R. 6 E., lat. 34 deg. 59 min., long. 97 deg. 48 min. A cableway (no bridge) over the river about 4-1/2 miles south and 1 mile east of Tabler; at river mile 236.1, approximately 7.8 miles downstream from the confluence of the Little Washita River.

AREA: 3011800.00 acres 4706.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 600 NEAR TABLER															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.90	2.34	2.19	1.84	5.28	3.21	1.08	2.75	4.65	1.59	0.20	1.32	27.35															
	Q	0.071	0.038	0.066	0.074	0.655	0.147	0.029	0.037	0.083	0.032	0.028	0.030	1.292															
STA AV	P	1.15	1.40	1.62	2.85	4.44	2.21	1.78	3.54	3.93	1.66	1.94	0.88	27.39															
	Q	0.044	0.039	0.049	0.078	0.176	0.109	0.046	0.040	0.083	0.076	0.074	0.046	0.860															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge				1 Hour				2 Hours				Maximum Volume for Selected Time Interval															
		Date		Rate		Date		Vol.		Date		Vol.		Date		Vol.		Date		Vol.		Date		Vol.		Date		Vol.	
1969		5- 7	0.003	5- 7	0.003	5- 7	0.007	5- 7	0.019	5- 7	0.036	5- 6	0.066	5- 6	0.113	5- 5	0.336												
MAXIMUMS FOR PERIOD OF RECORD																													
		5- 7	0.003	5- 7	0.003	5- 7	0.007	5- 7	0.019	5- 7	0.036	5- 6	0.066	5- 6	0.113	5- 5	0.336												
	1969			1969		1969		1969		1969		1969		1969		1969													

NOTES: Watershed conditions: For area not included above subwatersheds as determined from a 1967 survey; sowed crop - 20%; row crop - 6%; alfalfa - 12%; pasture and range - 52%; and miscellaneous - 10%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.7-9 (Geologic); 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data based on a Thiessen weighted average of 66 gages for the reach between stations at Chickasha (Turnpike) and Tabler, Okla. For record period of Jan. 1964 to Dec. 1969. Precipitation records began Oct. 1961; Runoff records began July 1963. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)														CHICKASHA, OKLAHOMA WATERSHED 600 NEAR TABLER													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0															
2	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.95	0.29	0.0	0.03	0.0															
3	0.0	0.0	0.05	0.0	1.04	0.0	0.0	0.0	0.21	0.0	0.0	0.0															
4	0.0	0.0	0.0	0.0	1.06	0.0	0.0	0.23	0.0	0.0	0.0	0.0															
5	0.0	0.0	0.11	0.0	0.26	0.0	0.0	0.07	0.0	0.09	0.0	0.51															
6	0.0	0.0	0.0	0.0	1.72	0.0	0.0	0.0	0.0	0.28	0.0	0.02															
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0															
8	0.0	0.0	0.0	0.0	0.01	0.07	0.0	0.0	0.19	0.0	0.0	0.0															
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0															
11	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.05	0.03	0.0	0.0															
12	0.0	0.0	0.0	0.06	0.36	0.01	0.0	0.0	0.0	0.41	0.0	0.0															
13	0.0	0.48	0.0	0.06	0.08	1.40	0.0	0.0	0.0	0.0	0.0	0.0															
14	0.0	0.89	0.07	0.0	0.02	1.39	0.0	0.0	0.05	0.0	0.0	0.0															
15	0.0	0.01	0.05	0.0	0.0	0.0	0.0	0.42	0.0	0.0	0.0	0.0															
16	0.0	0.0	0.0	0.88	0.42	0.0	0.0	0.0	1.43	0.0	0.0	0.0															
17	0.0	0.01	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
18	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0															
19	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
20	0.0	0.58	0.0	0.0	0.0	0.02	0.48	0.0	0.0	0.01	0.0	0.06															
21	0.01	0.24	0.0	0.0	0.0	0.0	0.01	0.0	1.56	0.02	0.0	0.0															
22	0.0	0.0	0.33	0.0	0.0	0.0	0.05	0.43	0.86	0.10	0.0	0.0															
23	0.0	0.12	1.00	0.07	0.0	0.0	0.0	0.08	0.0	0.24	0.0	0.0															
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
25	0.0	0.0	0.0	0.0	0.0	0.07	0.39	0.50	0.0	0.0	0.0	0.0															
26	0.0	0.0	0.0	0.76	0.0	0.0	0.14	0.0	0.0	0.0	0.17	0.0															
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.06	0.0	0.12	0.0	0.0															
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.37															
29	0.84	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.26	0.0	0.29															
30	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.07															
31	0.05	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0															
TOTAL	0.90	2.34	2.19	1.84	5.28	3.21	1.08	2.75	4.65	1.59	0.20	1.32															
STA AV	1.15	1.40	1.62	2.85	4.44	2.21	1.78	3.54	3.93	1.66	1.94	0.88															

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69-007) of this publication. Precipitation values are a Thiessen weighted average of 66 rain gages on the watershed for record period of Jan. 1964 to Dec. 1969. STA AV based on 6 yr (1964-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA				WATERSHED 600 NEAR TABLE			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	244.7	160.1	170.1	271.0	316.4	502.4	208.3	67.8	716.0	156.1	129.6	118.8	
2	240.0	158.1	166.1	254.2	290.9	459.5	215.8	68.2	624.1	144.5	122.3	120.6	
3	228.5	146.4	188.8	240.0	251.8	429.8	149.3	127.4	623.2	135.1	124.1	118.8	
4	193.1	138.8	221.7	221.7	868.7	409.5	166.1	159.8	508.0	125.9	122.3	120.6	
5	158.1	133.2	228.5	201.7	4279.5	384.0	158.1	125.9	493.8	124.1	125.9	125.9	
6	176.3	125.9	235.4	191.0	4324.9	367.3	148.3	127.7	358.9	127.7	124.1	138.8	
7	162.1	127.7	242.3	188.8	8363.1	356.3	144.5	110.1	288.4	137.0	122.3	135.1	
8	152.2	124.1	261.3	186.7	5926.2	345.5	135.1	108.4	240.0	135.1	120.6	127.7	
9	146.4	120.6	261.3	201.7	5471.9	342.8	127.7	106.7	210.5	131.4	118.8	129.6	
10	152.2	115.3	271.0	203.9	5505.7	324.3	117.0	87.1	182.5	127.7	115.3	129.6	
11	152.2	111.8	261.3	188.8	5347.7	316.4	110.1	84.0	168.1	125.9	113.5	125.9	
12	150.3	113.5	237.7	174.2	3185.5	285.9	100.0	65.0	158.1	131.4	113.5	127.7	
13	142.6	110.1	219.4	170.1	2368.7	285.9	93.5	59.5	200.9	146.4	113.5	127.7	
14	140.7	159.9	206.1	172.2	3447.4	3005.5	91.9	56.8	195.2	146.4	110.1	125.9	
15	138.8	231.2	203.9	168.1	4307.3	1404.8	85.6	60.8	168.1	164.1	110.1	125.9	
16	135.1	210.5	206.1	162.1	4164.2	1372.7	82.5	56.8	422.2	146.4	111.8	127.7	
17	418.3	195.2	206.1	1082.7	3689.5	1633.9	79.5	49.1	538.2	138.8	111.8	124.1	
18	933.0	180.4	203.9	673.2	3116.5	1172.8	76.5	50.4	293.4	127.7	111.8	122.3	
19	1005.3	178.4	195.2	376.8	2803.4	897.1	75.0	60.8	202.3	125.9	111.8	122.3	
20	846.8	221.1	186.7	276.0	2318.4	735.2	69.2	66.4	351.8	120.6	106.7	124.1	
21	626.9	268.6	178.4	329.5	2199.9	606.0	326.7	63.6	479.3	120.6	106.7	124.1	
22	459.9	265.0	176.3	285.9	2056.8	493.1	110.8	54.2	634.9	120.6	111.8	125.9	
23	402.0	223.9	344.5	230.8	1606.2	381.2	82.5	239.1	740.8	125.9	113.5	124.1	
24	273.7	214.9	467.0	206.1	1178.6	311.2	75.0	90.5	411.3	135.1	113.5	122.3	
25	206.1	214.9	410.9	191.0	948.6	266.2	60.8	69.2	298.1	133.2	115.3	118.8	
26	184.6	217.2	345.9	193.8	850.6	416.9	81.0	82.5	221.7	125.9	117.0	118.8	
27	174.2	201.7	558.8	883.8	786.4	417.3	113.5	171.7	203.9	120.6	120.6	118.8	
28	168.1	184.6	509.0	614.7	905.0	254.2	138.8	152.2	201.7	117.0	122.3	118.8	
29	222.8		388.1	421.1	827.7	217.2	118.8	172.4	186.7	125.9	120.6	120.6	
30	214.3		329.5	378.4	657.2	208.3	87.1	978.8	168.1	137.0	118.8	122.3	
31	168.1		295.9		572.8		75.0	951.9		131.4		101.7	
MEAN	290.8	173.3	270.2	311.3	2675.4	620.1	119.5	152.4	349.7	132.6	116.7	123.7	
INCHES	0.071	0.038	0.066	0.074	0.655	0.147	0.029	0.037	0.083	0.032	0.028	0.030	
STA AV	0.044	0.039	0.049	0.078	0.176	0.109	0.046	0.040	0.083	0.076	0.074	0.046	

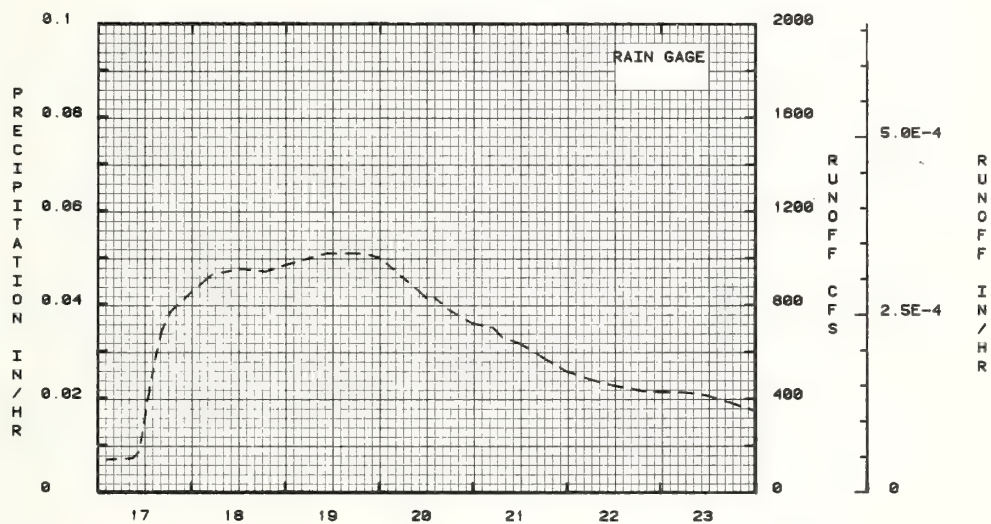
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000007903. To convert discharge in inches to AC-FT, multiply by 250,983. STA AV based on 7 yr (1963-69) record period.

1969	SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA				WATERSHED 600 NEAR TABLE			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JANUARY 16 - 23, 1969											
1-16		0.001					1-16	2400	135.10	0.0	
							1-17	1	134.70	0.0	
								906	142.60	0.0004	
								1036	168.60	0.0005	
								1136	252.90	0.0006	
WATERSHED CONDITIONS:								1224	345.70	0.0007	
For area not included above								1324	446.10	0.0008	
subwatersheds as determined								1448	571.90	0.0010	
from a 1967 survey; sowed								1618	680.20	0.0013	
crop - 20%; row crop - 6%;								1836	768.60	0.0018	
alfalfa - 12%; pasture and											
range - 52%; and miscel-								2400	853.30	0.0032	
laneous - 10%.							1-18	518	928.30	0.0048	
								1230	950.60	0.0070	
								1842	938.60	0.0089	
								2400	967.50	0.0106	
								1-19	1030	1018.50	0.0140
								1900	1018.50	0.0169	
								2400	999.20	0.0186	
							1-20	1000	858.30	0.0217	
								1200	827.90	0.0223	
								1400	831.50	0.0228	
								1800	775.30	0.0239	
								2400	717.00	0.0254	
							1-21	500	702.80	0.0266	
								730	660.40	0.0272	
								1200	633.10	0.0282	
								1800	572.80	0.0294	
								2400	514.90	0.0305	
							1-22	600	480.80	0.0315	
								1200	453.50	0.0324	
								2000	429.80	0.0336	
								2400	426.90	0.0342	
							1-23	600	426.90	0.0350	
								1200	412.40	0.0358	
								1800	381.20	0.0366	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000003293. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT										
CHICKASHA, OKLAHOMA WATERSHED 600 NEAR TABLE										
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JANUARY 16 - 23, 1969 (CONTINUED)										
								2400	348.20	0.0373

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003293. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



EVENT OF JANUARY 16 - 23, 1969

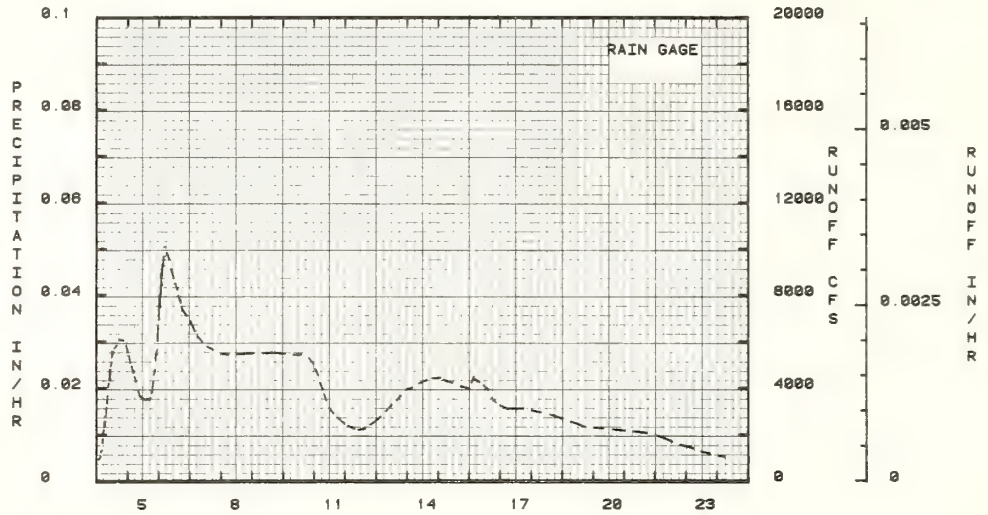
CHICKASHA, OKLAHOMA WATERSHED 600 NEAR TABLER

1969 SELECTED RUNOFF EVENT			CHICKASAW, OKLAHOMA WATERSHED 600 NEAR TABLE					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF MAY 5 - 24, 1969								
5- 5		0.001					5- 5	154
								242
								306
								330
								406
								436
								506
								530
								600
								624
								654
								724
								754
								824
								848
								918
								942
								1000
								1036
								1124
								1200
								1254
								1342
								1524
								1718
								2030
								2242
								2400
							5- 6	100
								206
								306
								406
								506
								612
								742
								918
								1006
								1154
								1306
								1448
								1600
								1730
								1836
								1936
								2012
								2100
								2136
								2224
								2254
								2324
								2400
							5- 7	18
								42
								100
								118
								130
								200
								242
								312
								336
								400
								500
								612
								806
								948
								1118
								1236
								1400
								1518
								1630
								1742
								1818
								1906
								2042
								2400

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003293. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969			SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 600 NEAR TABLE		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 5 - 24, 1969 (CONTINUED)											
							5- 7	248	6455.59	0.1397	
								524	6218.38	0.1451	
								842	5998.09	0.1517	
								1248	5783.59	0.1597	
								1648	5635.88	0.1672	
								2400	5459.29	0.1804	
							5- 9	436	5439.29	0.1887	
								1712	5491.98	0.2114	
								2400	5505.59	0.2237	
							5-10	1348	5520.79	0.2488	
								2400	5470.38	0.2673	
							5-11	906	5419.38	0.2836	
								1306	5443.29	0.2908	
								1918	5289.59	0.3018	
								2212	5025.09	0.3067	
								2400	4800.79	0.3096	
							5-12	142	4520.09	0.3122	
								306	4210.88	0.3142	
								442	3936.50	0.3163	
								606	3726.00	0.3181	
								724	3455.70	0.3196	
								936	3146.20	0.3220	
								1218	2902.60	0.3247	
								1600	2707.00	0.3281	
								2030	2458.20	0.3319	
								2400	2364.50	0.3347	
							5-13	424	2239.70	0.3380	
								748	2204.90	0.3405	
								1224	2254.30	0.3439	
								1648	2415.80	0.3473	
								2400	2760.40	0.3534	
							5-14	424	2997.80	0.3576	
								812	3248.70	0.3615	
								1224	3456.70	0.3661	
								1524	3664.90	0.3696	
								1912	3913.00	0.3743	
								2400	4019.90	0.3806	
							5-15	518	4197.38	0.3878	
								1048	4341.48	0.3955	
								1536	4417.59	0.4024	
								2118	4437.38	0.4107	
								2400	4346.68	0.4146	
							5-16	606	4212.48	0.4232	
								1406	4037.50	0.4341	
								1912	3965.60	0.4408	
								2118	4215.68	0.4436	
								2236	4479.98	0.4455	
								2400	4355.98	0.4475	
							5-17	254	4234.59	0.4516	
								636	4103.59	0.4567	
								948	3923.50	0.4609	
								1230	3562.30	0.4642	
								1518	3373.70	0.4674	
								1854	3235.70	0.4713	
								2330	3095.50	0.4761	
								2400	3092.60	0.4766	
							5-18	1	3116.50	0.4766	
								2400	3116.50	0.5012	
							5-19	1	2803.30	0.5012	
								2400	2803.30	0.5233	
								1	2318.20	0.5233	
							5-20	2400	2318.20	0.5416	
								1	2199.90	0.5416	
							5-21	2400	2199.90	0.5590	
								1	2056.80	0.5590	
							5-22				
								2400	2056.80	0.5752	
							5-23	1	1880.20	0.5752	
								754	1674.20	0.5798	
								1548	1516.10	0.5839	
								2400	1387.30	0.5878	
							5-24	624	1257.30	0.5906	
								1242	1145.30	0.5931	
								1930	1072.90	0.5956	
								2400	1021.70	0.5972	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000003293. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



EVENT OF MAY 5 - 24, 1969
 CHICKASBA, OKLAHOMA WATERSHED 600 NEAR TABLER

CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX

LOCATION: Washita River Watershed above Alex, Okla.; Southwest Central Oklahoma and Texas Panhandle; in Grady, Caddo, Canadian, Kiowa, Washita, Custer, Beckham and Roger Mills Counties, Okla.; and Hemphill, Wheeler, and Gray Counties, Tex.; Washita River, Red River Basin. GAGING STATION--NW1/4 sec. 7, T. 5 N., R. 5 W., lat. 34 deg. 55 min., long. 97 deg. 46 min., 1 mile north of Alex, Okla.; at county road bridge over Washita River at river mile 226.5 approximately 3.8 miles downstream from confluence of Winter Creek.

AREA: 3061120.00 acres 4783.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX																
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																
1969	P	1.73	2.48	2.22	1.49	4.55	3.03	2.14	2.80	4.41	1.53	0.24	1.64	28.26																
	Q	0.074	0.043	0.073	0.076	0.658	0.162	0.033	0.040	0.090	0.031	0.028	0.030	1.341																
STA AV	P	1.50	1.51	1.63	2.82	4.68	2.11	2.17	3.16	3.84	1.32	2.07	0.90	27.72																
	Q	0.052	0.048	0.056	0.082	0.158	0.161	0.057	0.044	0.097	0.087	0.096	0.056	0.994																
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																														
Maximum Discharge Date Rate 1 Hour Date Vol. 2 Hours Date Vol. Maximum Volume for Selected Time Interval 6 Hours Date Vol. 12 Hours Date Vol. 1 Day Date Vol. 2 Days Date Vol. 8 Days Date Vol.																														
1969	5- 7	0.003	5- 7	0.003	5- 7	0.006	5- 7	0.018	5- 7	0.034	5- 7	0.064	5- 6	0.114	5- 5	0.336														
MAXIMUMS FOR PERIOD OF RECORD																														
	5- 7	0.003	5- 7	0.003	5- 7	0.006	9-20	0.019	9-20	0.035	5- 7	0.064	5- 6	0.114	5- 5	0.336														
	1969		1969		1969		1962		1962		1969		1969		1969															

NOTES: Watershed conditions: For area not included above subwatersheds as determined from a 1967 survey; sowed crop 11%; row crop - 9%; alfalfa - 7%; pasture and range - 66%; and miscellaneous - 7%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1246, p. 69.7-21. Precipitation data based on a Thiessen weighted average of 21 rain gages on the reach from Tabler to Alex, Okla. for record period of August 1963 to Dec. 1969. Precipitation records began Oct. 1961; runoff records began Sept. 1961. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY AIR TEMPERATURE (degrees F)												CHICKASHA, OKLAHOMA				WATERSHED 700 NEAR ALEX								
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min
1	44	16	49	34	56	30	77	55	81	60	77	63	96	68	93	66	91	60	89	61	59	34	64	26
2	57	34	52	31	46	36	70	55	79	59	79	56	101	74	85	67	84	66	88	57	56	38	66	28
3	36	19	56	24	42	36	83	61	78	59	78	60	100	75	89	69	85	67	84	67	55	33	61	29
4	37	15	60	30	52	29	84	60	76	63	83	54	99	78	77	69	87	65	83	63	59	32	58	27
5	53	29	62	43	43	35	64	43	78	62	91	60	97	75	95	69	91	72	75	54	72	38	45	36
6	57	32	73	40	43	32	68	37	74	62	94	65	97	77	90	71	91	71	61	46	78	46	39	37
7	51	31	78	40	54	32	83	46	75	62	91	68	98	77	95	69	97	72	76	40	79	42	44	30
8	67	34	52	30	42	24	82	65	65	48	91	67	99	78	96	67	86	69	76	43	82	38	45	34
9	38	22	56	22	41	22	77	52	76	45	79	66	99	76	101	74	81	68	81	51	72	39	50	35
10	34	21	68	34	42	24	75	48	72	52	89	58	102	75	95	72	76	65	87	60	76	41	48	31
11	46	17	64	33	44	24	74	47	79	48	94	72	101	76	98	67	79	59	60	55	78	48	54	29
12	55	32	50	30	42	28	68	56	81	58	82	64	99	76	99	75	80	55	57	41	69	37	64	23
13	54	32	50	37	53	25	62	47	79	62	82	64	98	74	106	73	84	61	53	37	57	33	68	29
14	59	47	40	36	44	36	75	42	81	63	73	64	98	75	94	75	80	68	58	32	43	26	63	33
15	62	55	39	35	46	34	83	57	75	62	76	57	98	76	89	68	89	71	70	44	67	29	48	27
16	68	54	39	34	60	37	83	60	83	63	82	60	98	77	94	68	81	64	58	36	66	45	51	24
17	54	40	44	33	69	32	65	51	64	57	84	68	96	73	94	64	82	65	61	34	74	41	59	40
18	40	36	47	28	80	40	66	48	75	56	86	66	98	72	92	65	78	61	75	57	43	28	51	39
19	46	38	46	33	84	43	70	42	86	56	93	66	101	69	99	68	79	56	74	62	53	24	48	32
20	72	45	42	35	65	41	76	43	86	66	94	71	94	73	99	75	82	57	73	49	65	22	45	41
21	54	40	49	42	72	31	86	55	90	68	97	73	94	71	99	74	77	65	72	42	68	25	55	32
22	72	34	53	38	66	40	88	56	73	60	97	80	94	73	94	75	83	63	67	42	69	40	74	30
23	35	19	50	38	54	45	58	53	82	58	97	74	98	72	85	71	88	57	54	48	56	32	59	33
24	32	15	60	42	50	37	73	49	90	65	97	70	94	75	85	68	77	52	64	49	63	28	53	34
25	47	25	70	39	54	36	71	58	87	67	92	76	81	70	73	67	85	57	67	54	61	30	56	26
26	64	33	73	52	60	30	71	52	90	65	94	77	91	73	80	68	86	61	51	46	83	29	59	21
27	74	40	60	47	66	36	68	47	89	66	95	77	94	72	85	68	91	62	47	38	42	26	58	35
28	61	34	56	33	73	44	64	43	91	68	95	75	91	62	86	68	90	60	50	39	46	18	35	27
29	38	33			54	37	76	42	93	68	96	77	89	61	86	67	88	65	48	43	54	19	27	23
30	45	33			48	40	81	54	94	70	97	76	91	66	88	68	88	60	59	41	66	20	30	13
31	52	33			61	44			97	67			91	71	90	66			59	35			36	14
AV.	51	31	55	35	55	34	74	50	81	60	88	67	96	73	91	69	84	63	67	47	63	32	52	29
MEAN	41.9		45.2		44.7		62.5		71.1		78.0		84.5		80.4		73.9		57.2		47.9		40.9	
STA AV	49	25	52	28	61	36	74	50	80	57	88	67	94	71	91	68	83	61	74	49	63	38	51	29

NOTES: AV and STA AV are rounded to the nearest degree. Mean rounded to the nearest tenth of a degree. STA AV based on records from Sept. 1962 through Dec. 1969. For Chickasha Experiment Station Evaporation Data, see U.S. Weather Bureau Climatological Data for Oklahoma.

1969	DAILY PRECIPITATION (inches)					CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.61	0.24	0.0	0.01	0.0
3	0.0	0.0	0.04	0.0	0.67	0.0	0.0	0.0	0.04	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.20	0.0	0.0	0.0	0.0
5	0.0	0.0	0.13	0.0	0.29	0.0	0.0	0.0	0.0	0.02	0.0	0.80
6	0.0	0.0	0.0	0.0	1.84	0.0	0.0	0.0	0.0	0.24	0.0	0.02
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.01	0.10	0.0	0.0	0.02	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0
11	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.11	0.0	0.0	0.0
12	0.0	0.0	0.0	0.05	0.43	0.04	0.0	0.0	0.0	0.45	0.0	0.0
13	0.0	0.41	0.0	0.13	0.0	0.87	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	1.04	0.07	0.0	0.0	1.66	0.0	0.0	0.07	0.0	0.0	0.0
15	0.01	0.01	0.04	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.39	0.66	0.0	0.0	0.0	1.43	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0
19	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.64	0.0	0.0	0.0	0.0	1.13	0.0	0.0	0.0	0.0	0.07
21	0.01	0.26	0.0	0.0	0.0	0.0	0.19	0.0	1.82	0.01	0.0	0.0
22	0.0	0.0	0.27	0.0	0.0	0.0	0.27	0.59	0.68	0.10	0.0	0.0
23	0.0	0.11	1.17	0.13	0.0	0.0	0.0	0.11	0.0	0.16	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.01	0.35	0.83	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.77	0.0	0.0	0.16	0.0	0.0	0.0	0.23	0.0
27	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.11	0.0	0.13	0.0	0.0
28	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.02	0.0	0.36
29	1.60	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.27	0.0	0.31
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08
31	0.07	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0
TOTAL	1.73	2.48	2.22	1.49	4.55	3.03	2.14	2.80	4.41	1.53	0.24	1.64
STA AV	1.50	1.51	1.63	2.82	4.68	2.11	2.17	3.16	3.84	1.32	2.07	0.90

NOTES: Precipitation values are a Thiessen weighted average of 21 rain gages on the watershed. STA AV based on 7 yr (1963-69) record period.

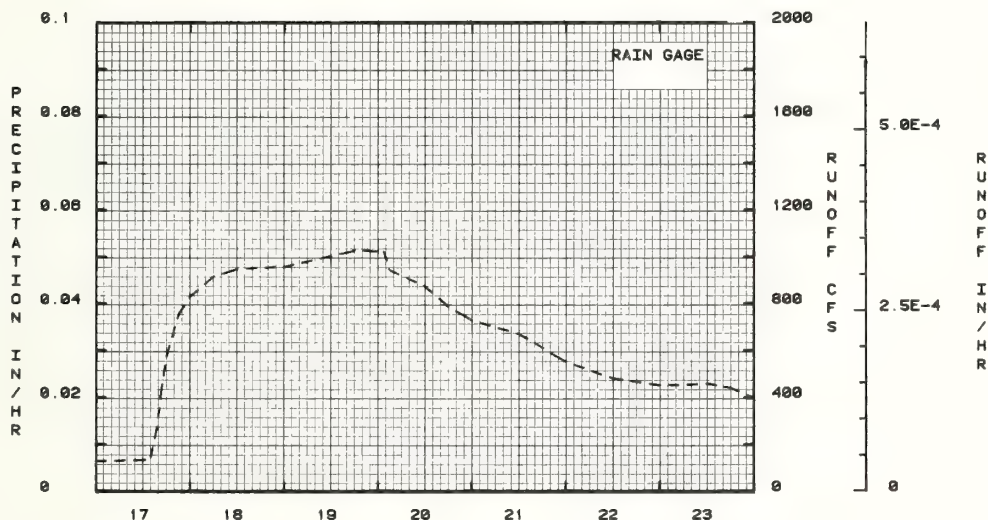
1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	247.0	214.0	167.0	313.0	359.0	513.0	237.0	84.0	899.0	170.0	130.0	122.0
2	223.0	197.0	161.0	290.0	316.0	490.0	250.0	86.0	703.0	153.0	128.0	123.0
3	217.0	170.0	194.0	278.0	253.0	464.0	174.0	130.0	662.0	138.0	125.0	122.0
4	206.0	159.0	229.0	262.0	821.0	446.0	166.0	171.0	556.0	131.0	126.0	122.0
5	200.0	148.0	250.0	241.0	3600.0	418.0	171.0	140.0	512.0	126.0	128.0	125.0
6	180.0	141.0	259.0	223.0	4630.0	390.0	164.0	141.0	431.0	126.0	128.0	138.0
7	167.0	133.0	259.0	209.0	8220.0	369.0	160.0	120.0	355.0	131.0	128.0	136.0
8	159.0	121.0	281.0	197.0	6400.0	349.0	152.0	108.0	305.0	131.0	126.0	131.0
9	143.0	113.0	284.0	220.0	5780.0	342.0	140.0	109.0	252.0	126.0	125.0	131.0
10	146.0	109.0	287.0	226.0	5630.0	326.0	130.0	91.0	211.0	122.0	123.0	130.0
11	148.0	109.0	297.0	206.0	5410.0	316.0	123.0	81.0	185.0	120.0	123.0	130.0
12	146.0	109.0	268.0	183.0	3560.0	294.0	112.0	74.0	166.0	125.0	123.0	130.0
13	138.0	104.0	244.0	178.0	2430.0	294.0	106.0	63.0	193.0	135.0	123.0	131.0
14	133.0	200.0	226.0	175.0	3230.0	3460.0	99.0	63.0	211.0	138.0	120.0	130.0
15	133.0	338.0	223.0	167.0	4070.0	1760.0	96.0	68.0	185.0	148.0	122.0	126.0
16	130.0	256.0	220.0	159.0	4050.0	1480.0	94.0	68.0	359.0	141.0	120.0	128.0
17	318.0	235.0	217.0	972.0	3790.0	1850.0	87.0	56.0	483.0	133.0	122.0	126.0
18	927.0	206.0	217.0	752.0	3140.0	1320.0	86.0	53.0	316.0	126.0	120.0	126.0
19	998.0	200.0	203.0	376.0	2910.0	920.0	83.0	63.0	228.0	122.0	119.0	125.0
20	861.0	282.0	192.0	268.0	2460.0	768.0	78.0	66.0	335.0	120.0	119.0	125.0
21	654.0	355.0	178.0	313.0	2330.0	649.0	376.0	72.0	532.0	119.0	117.0	126.0
22	490.0	333.0	172.0	310.0	2210.0	535.0	182.0	59.0	764.0	117.0	119.0	126.0
23	443.0	266.0	420.0	244.0	1740.0	432.0	120.0	185.0	759.0	119.0	119.0	126.0
24	318.0	241.0	601.0	203.0	1310.0	369.0	111.0	134.0	467.0	126.0	119.0	125.0
25	226.0	229.0	526.0	178.0	1050.0	329.0	87.0	84.0	360.0	126.0	119.0	122.0
26	200.0	229.0	420.0	185.0	920.0	425.0	101.0	95.0	280.0	123.0	119.0	120.0
27	192.0	212.0	611.0	873.0	846.0	615.0	115.0	153.0	237.0	122.0	119.0	120.0
28	178.0	186.0	614.0	693.0	956.0	380.0	155.0	159.0	228.0	122.0	120.0	120.0
29	420.0	474.0	498.0	498.0	925.0	284.0	136.0	140.0	209.0	125.0	120.0	126.0
30	339.0	383.0	443.0	443.0	722.0	253.0	109.0	959.0	187.0	135.0	120.0	128.0
31	235.0	339.0	339.0	593.0	593.0	593.0	91.0	1270.0	133.0	133.0	122.0	122.0
MEAN	306.9	199.8	303.7	327.8	2731.0	694.7	138.4	166.0	385.7	130.0	122.3	126.4
INCHES	0.074	0.043	0.073	0.076	0.658	0.162	0.033	0.040	0.090	0.031	0.028	0.030
STA AV	0.052	0.048	0.056	0.082	0.158	0.161	0.057	0.044	0.097	0.087	0.096	0.056

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000007776. To convert discharge in inches to AC-FT, multiply by 255,093. STA AV based on 9 yr (1961-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 700 NEAR ALEX		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF JANUARY 16 - 23, 1969								
1-16		0.001					1-16	2400
							1-17	1230
								1400
								1530
								1630
								1800
								2100
								2400
			1-18				600	916.00
							1200	947.30
								2400
			1-19				1200	1001.70
							1800	1024.70
							2400	1020.10
			1-20				130	1020.10
								300
							1200	871.70
							1800	785.30
							2400	726.40
			1-21				1200	668.80
								2400
			1-22				1200	479.10
							2400	449.90
			1-23				1200	457.20
							1800	439.10
							2400	396.80

WATERSHED CONDITIONS:
For area not included above
subwatersheds as determined
from a 1967 survey; sowed
crop - 11%; row crop - 9%;
alfalfa - 7%; pasture and
range - 66%; and miscel-
laneous - 7%.

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003240. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



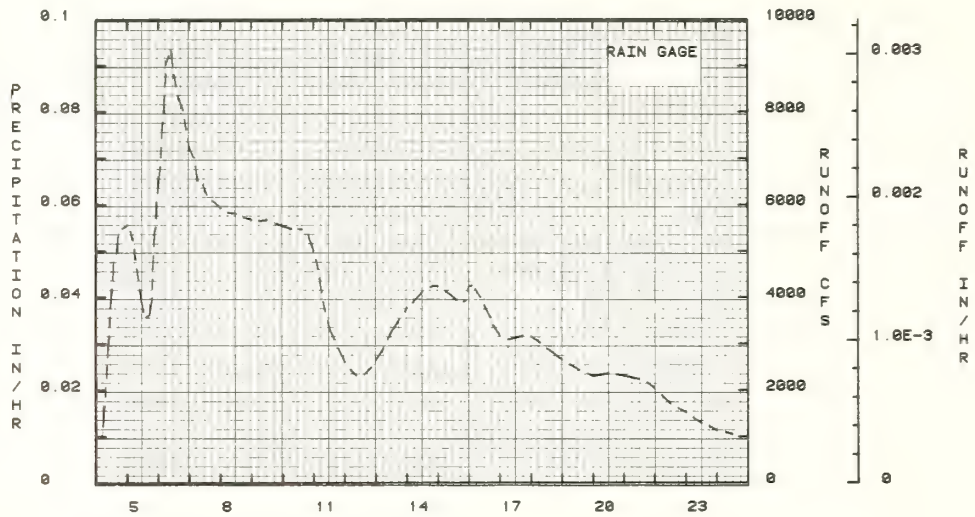
EVENT OF JANUARY 16 - 23, 1969
CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 5 - 25, 1969										
5- 5		0.001					5- 5	318	1001.70	0.0
								418	1031.10	0.0003
								518	1325.60	0.0007
								618	1668.20	0.0012
								648	1897.10	0.0015
								718	2069.40	0.0018
								748	2274.10	0.0022
								818	2526.50	0.0026
								900	2822.00	0.0032
								936	3168.20	0.0038
								1018	3577.00	0.0046
								1118	3886.60	0.0058
								1218	4180.79	0.0071
								1318	4765.98	0.0085
								1518	4973.38	0.0117
								1648	5354.38	0.0142
								1948	5486.68	0.0195
								2400	5569.38	0.0270
							5- 6	218	5432.09	0.0311
								518	5017.88	0.0362
								718	4571.48	0.0393
								948	4081.50	0.0428
								1218	3693.50	0.0459
								1418	3576.60	0.0483
								1548	3607.10	0.0500
								1718	3635.50	0.0518
								1848	3997.50	0.0537
								1930	4703.98	0.0547
								2018	5153.78	0.0560
								2118	5521.48	0.0577
								2218	6063.98	0.0596
								2400	6443.48	0.0630
							5- 7	118	6821.09	0.0658
								218	7248.09	0.0681
								318	7781.48	0.0705
								418	8142.09	0.0731
								518	8616.38	0.0758
								618	9070.29	0.0787
								748	9206.59	0.0831
								918	9347.38	0.0876
								1118	8999.28	0.0935
								1230	8748.18	0.0970
								1518	8307.29	0.1047
								1918	8038.79	0.1153
								2118	7612.18	0.1204
								2400	7227.29	0.1269
							5- 8	318	7017.48	0.1345
								618	6517.68	0.1411
								1018	6431.18	0.1495
								1318	6210.29	0.1556
								1800	6085.18	0.1650
								2400	5922.09	0.1767
							5- 9	600	5821.79	0.1881
								1200	5798.68	0.1994
								1800	5714.29	0.2106
								2400	5668.38	0.2217
							5-10	600	5645.48	0.2327
								1200	5668.38	0.2437
								2400	5523.88	0.2655
							5-11	700	5470.88	0.2780
								1230	5470.88	0.2877
								1500	5460.59	0.2921
								1930	5357.88	0.3000
								2400	5000.98	0.3076
							5-12	330	4601.18	0.3130
								600	4102.89	0.3165
								900	3683.70	0.3203
								1200	3338.00	0.3237
								1600	3080.40	0.3279
								2100	2772.70	0.3326
								2400	2599.20	0.3352
							5-13	500	2409.30	0.3393
								900	2315.00	0.3424
								1500	2338.50	0.3469
								2030	2492.80	0.3512

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003240. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 5 - 25, 1969 (CONTINUED)											
							5-13	2400	2656.00	0.3541	
							5-14	600	2909.70	0.3595	
								1100	3215.20	0.3645	
								1800	3536.10	0.3722	
								2300	3708.70	0.3781	
								2400	3778.40	0.3793	
							5-15	412	3881.00	0.3845	
								1218	4125.59	0.3950	
								2006	4247.09	0.4056	
								2400	4245.68	0.4110	
							5-16	730	4107.49	0.4211	
								1842	3937.80	0.4305	
								2000	3904.20	0.4372	
								2200	3935.80	0.4397	
								2400	4248.98	0.4424	
							5-17	206	4259.59	0.4453	
								500	4179.18	0.4493	
								854	4006.50	0.4545	
								1300	3760.70	0.4597	
								1618	3570.10	0.4636	
								2036	3312.50	0.4684	
								2400	3169.40	0.4720	
							5-18	618	3093.80	0.4784	
								1730	3177.10	0.4898	
								2400	3155.30	0.4965	
							5-19	706	3025.10	0.5036	
								1400	2860.90	0.5102	
								2400	2649.90	0.5191	
							5-20	800	2518.60	0.5258	
								1324	2431.30	0.5301	
								2400	2300.40	0.5382	
							5-21	1200	2362.00	0.5473	
								2400	2309.20	0.5564	
							5-22	1200	2233.40	0.5652	
								1800	2158.40	0.5695	
								2400	2033.30	0.5736	
							5-23	600	1871.70	0.5774	
								1200	1714.10	0.5809	
								1800	1613.20	0.5841	
								2400	1519.20	0.5871	
							5-24	600	1396.60	0.5899	
								1200	1291.80	0.5925	
								1800	1213.60	0.5949	
								2400	1132.20	0.5972	
							5-25	1200	1047.80	0.6014	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000003240. No precipitation record is shown because most of the watershed lies outside of the area in which precipitation is measured.



EVENT OF MAY 5 - 25, 1969
CHICKASHA, OKLAHOMA WATERSHED 700 NEAR ALEX

CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

LOCATION: Big Dry Creek Watershed above State Road 19 bridge in Grady County, Okla.; tributary to Washita River; Red River Basin.

AREA: 4845.00 acres 7.57 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA				WATERSHED 611 NEAR ALEX							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1966	P	0.58	1.96	1.07	4.86	0.65	2.38	2.50	5.61	3.52	0.35	0.55	0.26	24.29			
	Q	0.000	0.023	0.044	0.242	0.001	0.118	0.082	0.028	0.104	0.0	0.000	0.0	0.642			
1967	P	0.09	0.05	2.21	4.93	4.32	1.92	1.90	0.65	4.50	3.01	0.34	0.89	24.81			
	Q	0.0	0.000	0.002	0.230	0.042	0.005	0.001	0.0	0.017	0.007	0.0	0.0	0.303			
1968	P	3.66	1.79	1.91	2.60	7.39	2.20	3.48	0.78	3.34	2.09	4.56	1.10	34.90			
	Q	0.041	0.022	0.040	0.041	0.352	0.530	0.371	0.007	0.039	0.050	0.099	0.041	1.632			
1969	P	1.97	2.34	2.38	1.38	3.44	2.19	0.85	2.92	5.97	1.37	0.17	1.60	26.58			
	Q	0.213	0.284	0.354	0.159	0.557	0.168	0.009	0.005	0.736	0.060	0.040	0.053	2.639			
STA AV	P	1.17	1.29	1.63	2.58	3.86	2.72	2.01	2.61	3.80	1.60	2.19	0.98	26.41			
	Q	0.078	0.092	0.105	0.160	0.310	0.202	0.075	0.031	0.148	0.044	0.087	0.063	1.396			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				2 Days		8 Days			
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	Date	Vol.	Date	Vol.	Date	Vol.	
1966		6-16	0.073	6-15	0.062	6-15	0.092	4-25	0.132	4-25	0.161	4-25	0.175	4-25	0.178	4-22	0.241
1967		4-12	0.021	4-12	0.018	4-12	0.032	4-12	0.064	4-12	0.082	4-9	0.094	4-12	0.120	4-9	0.226
1968		7-1	0.100	7-1	0.084	7-1	0.131	7-1	0.195	7-1	0.218	5-31	0.273	5-31	0.351	5-31	0.586
1969		9-21	0.327	9-21	0.292	9-21	0.441	9-21	0.538	9-21	0.559	9-21	0.584	9-21	0.623	9-21	0.714
MAXIMUMS FOR PERIOD OF RECORD																	
		5-9	0.501	5-9	0.423	5-9	0.557	5-9	0.649	5-9	0.667	5-9	0.880	5-9	0.988	5-6	1.154
		1964		1964		1964		1964		1964		1964		1964		1964	

NOTES: Watershed conditions: 1966: Same as that described in Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.8-1. Watershed conditions: 1967, 1968, 1969: See Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, p. 69.7-4. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, pp. 69.8-5 (Topography), 69.7-9 (Geologic) and 1965, p. 69.7-21 (Composite). Precipitation data obtained from Thiessen weighted average of 7 gages. Precipitation records began Oct. 1961; runoff records began Dec. 1961. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1966 DAILY PRECIPITATION (inches)													
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.08	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.01	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.43	0.05	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
5	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.94	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.03	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.09	0.03	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.83	0.0	0.0	0.0	0.0	1.15	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.20	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.11	0.75	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.02	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	1.81	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.20	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.26	0.32	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.71	0.0	0.0	0.0	0.0	0.0
19	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.12	0.25	0.0	0.0	0.16	0.0	0.0	0.60	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	1.90	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.01
23	0.0	0.0	0.0	0.91	0.0	0.0	1.35	1.03	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	1.15	0.35	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	1.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.10	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0
27	0.0	0.67	0.04	0.0	0.0	0.0	0.0	0.0	0.90	0.0	0.0	0.17	0.0
28	0.12	0.0	0.0	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.01
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.0
TOTAL	0.58	1.96	1.07	4.86	0.65	2.38	2.50	5.61	3.52	0.35	0.55	0.26	
STA AV	0.72	1.23	1.30	2.35	3.15	3.08	1.96	3.30	3.31	1.32	2.43	0.87	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Daily precipitation values Thiessen weighted average of 7 rain gages on the watershed. STA AV based on 6 yr (1961-66) record period.

1967 DAILY PRECIPITATION (inches) CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.19	0.0
3	0.0	0.0	0.0	0.0	0.02	0.0	0.59	0.0	1.28	0.0	0.04	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.68	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	1.21	0.0	0.12	0.01	0.98	0.0	0.0	0.0
6	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0	0.03	0.43	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0
9	0.0	0.0	0.0	1.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.05	1.39	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.46	0.02	0.0	0.0	0.0	0.04	0.0	0.0	0.03
14	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.30	0.0	0.0	0.12
15	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.02	0.0	1.23	0.0	0.04
16	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.03	0.0	0.0	0.54
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.25	0.47	0.0	0.01	0.0	0.0	0.0
19	0.0	0.0	0.48	0.11	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.23	1.28	0.0	0.0	0.0	0.20	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0
22	0.0	0.0	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.57	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0	0.0
26	0.09	0.0	0.05	0.0	0.0	1.13	0.0	0.0	0.73	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.15	0.02	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.0	0.06	0.0
29	0.0	0.0	0.0	0.0	0.79	0.0	0.0	0.0	0.0	0.02	0.05	0.0
30	0.0	0.0	0.01	0.0	0.72	0.0	0.0	0.29	0.0	1.00	0.0	0.11
31	0.0	0.0	0.40	0.0	0.26	0.0	0.0	0.07	0.0	0.33	0.0	0.0
TOTAL	0.09	0.05	2.21	4.93	4.32	1.92	1.90	0.65	4.50	3.01	0.34	0.89
STA AV	0.62	1.04	1.45	2.78	3.34	2.89	1.95	2.86	3.51	1.56	2.13	0.87

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Daily precipitation values Thiessen weighted average of 7 rain gages on the watershed. STA AV based on 7 yr (1961-67) record period.

1968 DAILY PRECIPITATION (inches) CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.34	0.0	0.17	0.0	0.66	2.58	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.0
3	0.0	0.0	0.0	0.17	0.0	0.01	0.0	0.0	1.71	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.0	0.0
6	0.03	0.0	0.0	0.0	1.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.02	0.0	0.15	0.16	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.96	0.0	0.0	0.0	0.0	1.34	0.0	0.0
10	0.0	0.0	0.09	0.0	0.55	0.0	0.0	0.0	0.0	0.0	0.08	0.0
11	0.03	0.0	0.25	0.0	0.02	0.0	0.0	0.06	0.0	0.0	0.0	0.0
12	0.0	0.09	0.0	0.22	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.01
13	0.0	0.10	0.0	0.0	0.54	0.0	0.16	0.18	0.0	0.0	0.0	0.0
14	0.0	0.16	0.0	0.0	0.0	0.0	0.39	0.02	0.0	0.0	0.01	0.0
15	0.0	0.0	0.0	0.0	0.0	1.05	0.0	0.15	0.04	0.0	1.23	0.0
16	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.15	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0
18	1.69	0.04	0.32	0.93	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.14
19	0.13	0.0	0.50	0.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.07	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.16	0.27	0.0	0.22	0.60	0.0	0.0	0.0	0.0	0.01	0.0	0.30
22	0.04	0.21	0.09	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.02	0.0	0.0	0.0	0.03	0.0	0.0	0.46	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.30	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	1.33	0.27	0.0	0.01	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.61	0.0
27	0.97	0.56	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.55	0.65
28	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.21	0.0
29	0.13	0.0	0.0	0.0	0.02	0.0	0.01	0.0	0.0	0.0	0.0	0.0
30	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.10	0.0
31	0.06	0.0	0.0	0.0	2.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	3.66	1.79	1.91	2.60	7.39	2.20	3.48	0.78	3.34	2.09	4.56	1.10
STA AV	1.05	1.14	1.52	2.75	3.92	2.79	2.17	2.56	3.49	1.63	2.44	0.90

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Daily precipitation values Thiessen weighted average of 7 rain gages on the watershed. STA AV based on 8 yr (1961-68) record period.

1969	DAILY PRECIPITATION (inches)					CHICKASBA, OKLAHOMA			WATERSHED 611 NEAR ALEX			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.56	0.0	0.0	0.0	0.0	0.64	0.12	0.0	0.02	0.0
3	0.0	0.0	0.05	0.0	0.30	0.0	0.0	0.0	0.03	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.68	0.0	0.0	0.56	0.0	0.0	0.0	0.0
5	0.0	0.0	0.10	0.0	0.26	0.0	0.0	0.0	0.0	0.03	0.0	0.72
6	0.0	0.0	0.0	0.0	1.37	0.0	0.0	0.0	0.0	0.23	0.0	0.02
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.02	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0
11	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.03	0.0	0.0	0.0
12	0.0	0.0	0.0	0.07	0.32	0.0	0.0	0.0	0.0	0.35	0.0	0.0
13	0.0	0.39	0.0	0.07	0.0	0.62	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.94	0.07	0.0	0.0	1.22	0.0	0.0	0.05	0.0	0.0	0.0
15	0.0	0.01	0.08	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.58	0.34	0.0	0.0	0.0	1.25	0.0	0.0	0.0
17	0.0	0.01	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.60	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.06
21	0.0	0.27	0.0	0.0	0.0	0.0	0.0	0.0	3.87	0.0	0.0	0.0
22	0.0	0.0	0.21	0.0	0.0	0.0	0.12	0.14	0.60	0.14	0.0	0.0
23	0.0	0.12	1.31	0.02	0.0	0.0	0.0	0.10	0.0	0.16	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.02	0.24	0.79	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.61	0.0	0.0	0.38	0.0	0.0	0.0	0.15	0.0
27	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.41	0.0	0.16	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.37
29	1.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.35
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08
31	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.97	2.34	2.38	1.38	3.44	2.19	0.85	2.92	5.97	1.37	0.17	1.60
STA AV	1.17	1.29	1.63	2.58	3.86	2.72	2.01	2.61	3.80	1.60	2.19	0.98

NOTES: For daily air temperatures in the vicinity, see table for Watershed 8-7000, (69.007) of this publication. Daily precipitation values are a Thiessen weighted average of 7 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1966	MEAN DAILY DISCHARGE (cfs)					CHICKASBA, OKLAHOMA			WATERSHED 611 NEAR ALEX			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.010	0.0	0.020	0.0	0.070	0.0	0.0	0.0	0.010	0.0	0.0	0.0
2	0.010	0.0	0.010	0.0	0.050	0.0	0.0	0.0	0.010	0.0	0.0	0.0
3	0.0 T	0.0	0.010	0.0	0.010	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0
4	0.0	0.0	0.0 T	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.010	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	3.797	0.010	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.730	0.010	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.020	0.010	0.0	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.010	0.010	0.0	0.010	0.0	0.0	0.517	0.0	0.0	0.0	0.0
12	0.0	0.010	8.663	0.0	0.010	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0
13	0.0	0.010	0.050	0.0	0.010	0.0	0.0	0.0	0.028	0.0	0.0	0.0
14	0.0	0.010	0.020	0.0	0.010	0.0	0.0	0.0	20.102	0.0	0.0	0.0
15	0.0	0.0 T	0.020	0.0	0.0 T	4.691	0.0	0.0	0.304	0.0	0.0	0.0
16	0.0	0.0	0.020	0.0	0.0	19.272	0.0	0.0	0.020	0.0	0.0	0.0
17	0.0	0.0	0.020	0.0	0.0	0.080	0.0	0.0	0.010	0.0	0.0	0.0
18	0.0	0.0	0.020	0.0	0.0	0.010	0.0	0.0	0.0 T	0.0	0.0	0.0
19	0.0	0.0	0.010	0.0	0.0	0.0 T	0.0	0.792	0.0	0.0	0.0	0.0
20	0.0	0.0	0.010	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0
21	0.0	0.010	0.010	0.0	0.0	0.0	0.0	0.044	0.0	0.0	0.0	0.0
22	0.0	0.010	0.010	3.246	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.010	0.0 T	8.864	0.0	0.0	0.178	3.441	0.0	0.0	0.0	0.0
24	0.0	0.010	0.0	0.583	0.0	0.0	16.484	0.253	0.0	0.0	0.0	0.0
25	0.0	0.010	0.0	31.185	0.0	0.0	0.102	0.030	0.0	0.0	0.0	0.0
26	0.0	0.010	0.0	5.109	0.0	0.0	0.0	0.0 T	0.0	0.0	0.010	0.0
27	0.0	0.069	0.010	0.120	0.0	0.0	0.0	0.0	0.562	0.0	0.0 T	0.0
28	0.0	0.030	0.010	0.020	0.0	0.0	0.0	0.0	0.022	0.0	0.0	0.0
29	0.0	0.0	0.010	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0 T	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.577	0.0	0.0	0.0	0.0
MEAN	0.0006	0.1695	0.2894	1.6399	0.0077	0.8004	0.5408	0.1824	0.7023	0.0	0.0003	0.0
INCHES	0.000	0.023	0.044	0.242	0.001	0.118	0.082	0.028	0.104	0.0	0.000	0.0
STA AV	0.074	0.085	0.088	0.170	0.307	0.183	0.044	0.047	0.078	0.047	0.112	0.079

NOTES: To convert runoff in CFS to IN/DAY, multiply by 0.004913. STA AV based on 6 yr (1961-66) record period.

1967 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.020	0.020	0.070	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.010	0.020	0.020	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.010	0.020	0.020	0.198	0.0	0.045	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0 T	0.030	0.020	0.010	0.0	0.110	0.0	0.0	0.0
5	0.0	0.0	0.0	0.010	0.999	0.010	0.010	0.0	3.186	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0 T	2.882	0.010	0.0 T	0.0	0.031	0.0	0.0	0.0
7	0.0	0.0	0.0	0.020	0.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.020	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	3.700	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.010	15.654	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0 T	0.366	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	17.889	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.010	6.461	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.010	1.265	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.010	0.640	0.020	0.0	0.0	0.0	0.0	1.314	0.0	0.0
16	0.0	0.0	0.0 T	0.200	0.010	0.0	0.0	0.0	0.0	0.065	0.0	0.0
17	0.0	0.0	0.0	0.070	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.010	0.0	0.040	0.010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.010	0.030	0.070	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.010	0.030	0.080	2.276	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0 T	0.010	0.050	0.373	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.050	0.040	0.070	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.030	0.030	0.030	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.020	0.020	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.050	0.030	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.040	0.020	0.030	0.760	0.0	0.0	0.069	0.0	0.0	0.0
27	0.0	0.0	0.020	0.020	0.040	0.065	0.0	0.0	0.003	0.0	0.0	0.0
28	0.0	0.0	0.0 T	0.020	0.010	0.010	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.030	0.121	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.010	0.020	0.113	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.020	0.020	1.090	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0011	0.0113	1.5602	0.2733	0.0328	0.0070	0.0	0.1188	0.0445	0.0	0.0
INCHES	0.0	0.000	0.002	0.230	0.042	0.005	0.001	0.0	0.017	0.007	0.0	0.0
STA AV	0.062	0.071	0.074	0.180	0.262	0.153	0.037	0.039	0.068	0.040	0.093	0.068

NOTES: To convert runoff in CFS to IN/DAY, multiply by 0.004913. STA AV based on 7 yr (1961-67) record period.

1968 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	2.397	0.040	0.080	0.050	29.949	42.301	0.080	0.040	0.040	0.070	0.380
2	0.0	0.050	0.050	0.080	0.040	15.330	9.810	0.080	0.030	0.040	0.170	0.300
3	0.0	0.030	0.040	0.120	0.040	12.771	6.120	0.080	0.182	0.030	0.300	0.230
4	0.0	0.030	0.050	0.040	0.030	10.751	3.921	0.080	6.279	0.030	0.100	0.230
5	0.0	0.020	0.050	0.040	0.030	8.661	2.530	0.070	0.100	0.080	0.100	0.230
6	0.0	0.020	0.050	0.030	0.407	6.121	1.910	0.050	0.050	0.070	0.100	0.230
7	0.0	0.020	0.070	0.030	2.111	4.281	1.300	0.050	0.040	0.050	0.080	0.230
8	0.0	0.020	0.040	0.030	0.129	2.811	1.050	0.050	0.040	0.050	0.100	0.230
9	0.0	0.020	0.030	0.030	2.331	1.590	0.830	0.040	0.030	8.070	0.100	0.230
10	0.0	0.020	0.040	0.030	5.646	1.050	0.580	0.040	0.030	0.100	0.120	0.230
11	0.0	0.020	0.070	0.030	0.640	0.700	0.480	0.050	0.030	0.080	0.100	0.270
12	0.0	0.020	0.100	0.040	0.270	0.580	0.380	0.050	0.030	0.080	0.100	0.270
13	0.0	0.020	0.050	0.080	2.721	0.480	0.340	0.070	0.040	0.080	0.120	0.200
14	0.0	0.020	0.040	0.040	1.392	0.340	0.480	0.070	0.040	0.070	0.120	0.170
15	0.0	0.020	0.030	0.030	0.430	6.178	0.480	0.080	0.050	0.070	3.888	0.200
16	0.0	0.020	0.030	0.030	0.200	2.151	0.340	0.070	0.050	0.100	0.270	0.270
17	0.0	0.020	0.030	0.030	0.150	1.050	0.300	0.040	0.050	0.070	0.200	0.270
18	0.070	0.020	0.040	0.472	0.120	0.640	0.230	0.040	0.040	0.070	0.150	0.300
19	0.369	0.020	3.123	5.145	0.100	0.430	0.200	0.030	0.030	0.070	0.150	0.230
20	0.030	0.020	0.830	0.341	0.100	0.340	0.170	0.020	0.040	0.070	0.150	0.230
21	0.020	0.030	1.967	0.270	0.380	0.270	0.170	0.020	0.070	0.080	0.150	0.340
22	0.020	0.030	0.598	0.760	0.270	0.230	0.120	0.020	0.070	0.100	0.150	0.340
23	0.010	0.040	0.270	0.150	0.150	0.200	0.150	0.020	0.150	0.100	0.150	0.230
24	0.010	0.040	0.120	0.070	0.120	0.200	0.200	0.020	0.150	0.080	0.150	0.200
25	0.010	0.040	0.080	0.070	17.817	0.150	0.200	0.040	0.070	0.070	0.150	0.270
26	0.010	0.020	0.070	0.050	2.670	0.120	0.170	0.030	0.050	0.070	6.058	0.270
27	5.865	0.101	0.050	0.070	1.910	0.120	0.200	0.020	0.040	0.070	2.419	0.480
28	0.314	1.292	0.050	0.070	1.050	0.100	0.200	0.020	0.040	0.070	3.072	0.480
29	0.040	0.050	0.050	0.050	0.380	0.080	0.120	0.030	0.040	0.070	0.900	0.340
30	1.482	0.070	0.050	0.050	0.200	0.070	0.100	0.050	0.040	0.070	0.430	0.300
31	0.050	0.070	0.070	0.070	29.748	0.080	0.080	0.050	0.050	0.050	0.050	0.230
MEAN	0.2677	0.1542	0.2645	0.2786	2.3107	3.5935	2.4343	0.0471	0.2647	0.3274	0.6706	0.2713
INCHES	0.041	0.022	0.040	0.041	0.352	0.530	0.371	0.007	0.039	0.050	0.099	0.041
STA AV	0.059	0.064	0.069	0.160	0.275	0.207	0.085	0.035	0.064	0.042	0.094	0.065

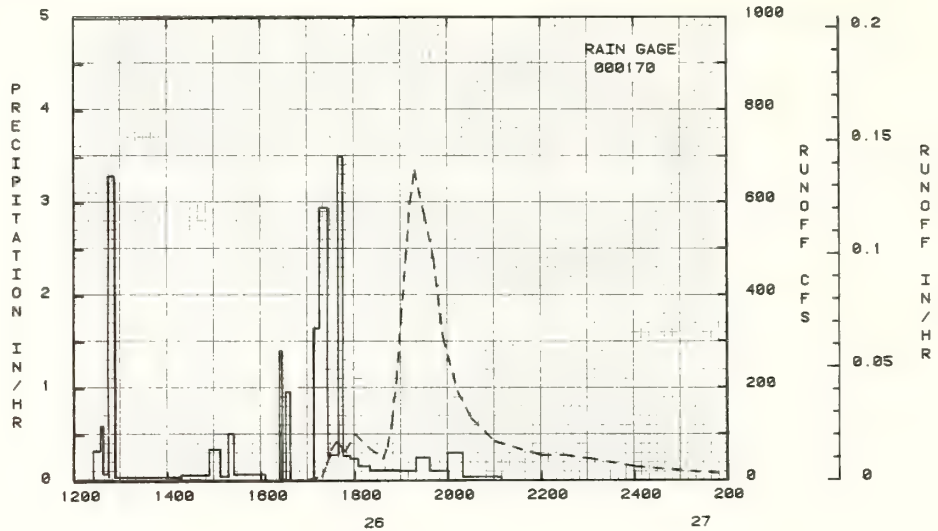
NOTES: To convert runoff in CFS to IN/DAY, multiply by 0.004913. STA AV based on 8 yr (1961-68) record period.

1969 MEAN DAILY DISCHARGE (cfs)						CHICKASHA, OKLAHOMA			WATERSHED 611 NEAR ALEX			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.23	3.75	1.22	1.70	0.70	0.53	0.17	0.02	0.02	0.76	0.30	0.30
2	0.30	2.40	1.30	1.49	0.70	0.48	0.15	0.08	0.03	0.70	0.30	0.30
3	0.30	1.30	2.03	1.40	0.76	0.48	0.15	0.04	0.03	0.64	0.30	0.30
4	0.23	1.05	2.03	1.40	1.00	0.48	0.15	0.20	0.02	0.53	0.27	0.30
5	0.27	0.97	1.70	1.13	5.77	0.48	0.10	0.05	0.01	0.48	0.27	0.48
6	0.30	0.83	1.59	1.05	28.29	0.43	0.08	0.04	0.0 T	0.53	0.27	0.58
7	0.30	0.70	1.49	1.05	14.62	0.38	0.08	0.03	0.0	0.53	0.27	0.38
8	0.30	0.58	1.22	1.05	9.82	0.43	0.05	0.03	0.0	0.53	0.27	0.34
9	0.27	0.53	1.05	1.05	8.11	0.43	0.05	0.02	0.0	0.48	0.27	0.34
10	0.23	0.53	0.97	0.97	6.35	0.48	0.05	0.02	0.0	0.38	0.23	0.38
11	0.23	0.48	0.97	0.90	4.65	0.38	0.04	0.02	0.0	0.34	0.27	0.34
12	0.27	0.43	0.97	0.90	4.28	0.38	0.07	0.01	0.01	0.43	0.23	0.34
13	0.27	0.34	0.90	0.97	3.26	0.58	0.07	0.01	0.01	0.38	0.27	0.34
14	0.27	4.93	0.90	0.97	2.67	12.52	0.03	0.0 T	0.0 T	0.34	0.23	0.34
15	0.30	4.61	0.97	0.83	2.40	3.58	0.03	0.02	0.01	0.38	0.27	0.34
16	0.30	2.95	0.97	0.83	2.40	2.27	0.02	0.02	1.98	0.30	0.30	0.30
17	0.34	1.91	0.97	1.63	2.15	1.59	0.03	0.02	0.03	0.30	0.30	0.30
18	0.30	1.49	0.97	1.05	1.91	1.59	0.03	0.02	0.02	0.30	0.27	0.34
19	0.30	1.22	0.90	0.97	1.70	1.22	0.02	0.01	0.02	0.30	0.23	0.30
20	0.34	4.96	0.76	0.90	1.49	1.05	0.03	0.0 T	0.01	0.27	0.23	0.34
21	0.34	5.27	0.76	0.83	1.30	0.90	0.04	0.0	107.75	0.23	0.27	0.34
22	0.34	4.28	0.83	0.97	1.22	0.76	0.05	0.0	13.29	0.27	0.27	0.34
23	0.30	3.10	15.36	0.97	1.22	0.58	0.03	0.01	7.58	0.34	0.27	0.30
24	0.27	2.53	8.94	0.76	1.13	0.48	0.02	0.02	5.90	0.34	0.27	0.30
25	0.27	2.03	6.59	0.76	0.97	0.43	0.05	0.07	4.46	0.30	0.27	0.30
26	0.27	1.80	4.46	1.83	0.90	0.38	0.10	0.04	3.42	0.27	0.27	0.30
27	0.30	1.49	3.26	1.53	0.83	0.27	0.04	0.04	2.03	0.30	0.30	0.38
28	0.30	1.30	2.53	0.83	0.76	0.23	0.03	0.04	1.30	0.30	0.27	0.38
29	22.52		2.03	0.83	0.70	0.20	0.02	0.03	1.05	0.38	0.30	0.43
30	7.58		1.80	0.83	0.70	0.17	0.02	0.03	0.90	0.34	0.30	0.43
31	5.25		1.70		0.64		0.04	0.02		0.30		0.38
MEAN	1.3999	2.0634	2.3273	1.0793	3.6582	1.1387	0.0594	0.0310	4.9963	0.3958	0.2713	0.3503
INCHES	0.213	0.284	0.354	0.159	0.557	0.168	0.009	0.005	0.736	0.060	0.040	0.053
STA AV	0.078	0.092	0.105	0.160	0.310	0.202	0.075	0.031	0.148	0.044	0.087	0.063

NOTES: To convert runoff in CFS to IN/DAY, multiply by 0.004913. STA AV based on 9 yr (1961-69) record period.

1963 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA				WATERSHED 611 NEAR ALEX			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 26 - 27, 1963										
RG 000170			RG 000170							
4-26	0.0	0.002	4-26	1225	0.0	0.0	4-26	1354	0.61	0.0
				1234	0.3333	0.05		1406	4.95	0.0001
				1237	0.6000	0.08		1448	1.83	0.0006
				1244	0.0857	0.09		1642	1.16	0.0012
				1252	3.3000	0.53		1700	2.21	0.0013
WATERSHED CONDITIONS: The land use of this 7.57 sq.-mi. watershed is not monitored seasonally. For a general description of the watershed cover, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.7-1.				1336	0.0409	0.56		1718	10.41	0.0017
				1417	0.0439	0.59		1724	35.30	0.0022
				1453	0.0667	0.63		1730	67.79	0.0033
				1507	0.3429	0.71		1736	83.53	0.0048
				1518	0.0545	0.72		1748	64.81	0.0078
				1525	0.5143	0.78		1800	100.62	0.0112
				1605	0.0750	0.83		1818	70.83	0.0165
				1624	0.0	0.83		1836	48.15	0.0202
				1627	1.3999	0.90		1842	73.92	0.0215
				1632	0.0	0.90		1848	130.38	0.0236
				1637	0.9601	0.98		1854	216.77	0.0272
				1707	0.0	0.98		1900	350.81	0.0330
				1715	1.6498	1.20		1906	477.15	0.0415
				1726	2.9457	1.74		1912	601.01	0.0525
				1739	0.2769	1.80		1918	669.58	0.0655
				1745	3.4998	2.15		1930	574.84	0.0910
	1754	0.2667	2.19		1942	477.15	0.1125			
	1804	0.2400	2.23		1954	307.64	0.1286			
	1819	0.1600	2.27		2012	192.09	0.1439			
	1856	0.1135	2.34		2030	132.62	0.1539			
	1919	0.1043	2.38		2100	83.53	0.1650			
	1936	0.2471	2.45		2200	53.47	0.1790			
	1959	0.1043	2.49		2230	53.47	0.1845			
	2019	0.3000	2.59		2300	46.85	0.1896			
	2108	0.0367	2.62		2400	29.08	0.1974			
							4-27	200	11.81	0.2058

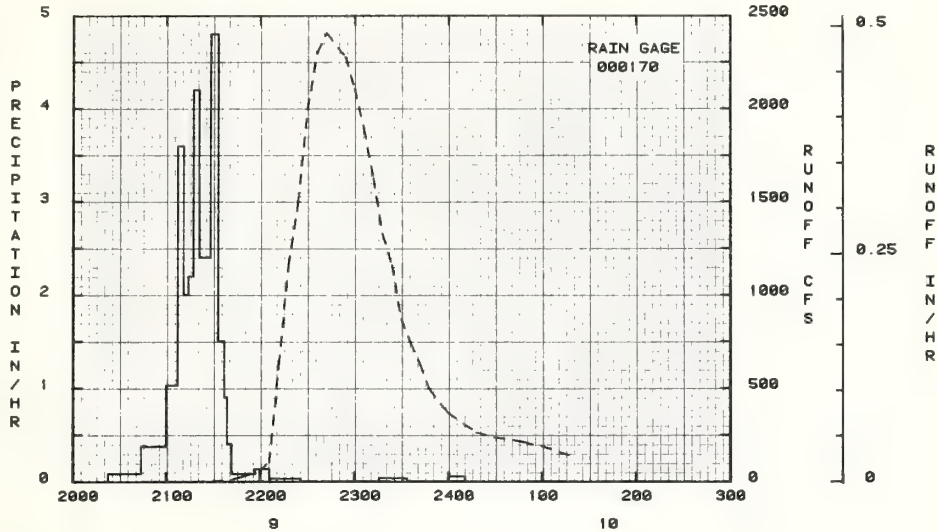
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



EVENT OF APRIL 26 - 27, 1963
CHICKASAW, OKLAHOMA WATERSHED 611 NEAR ALEX

1964 SELECTED RUNOFF EVENT			CHICKASAW, OKLAHOMA WATERSHED 611 NEAR ALEX					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF MAY 9 - 10, 1964								
5-9	RG 000170	0.000	5-9	2023	0.0	0.0	5-9	2118
	0.0			2044	0.0857	0.03		0.10
				2100	0.3750	0.13		0.80
				2107	1.0287	0.25		8.40
				2111	3.6001	0.49		25.10
								0.0002
				2114	1.9999	0.59		2148
				2117	2.1999	0.70		25.10
				2121	4.2001	0.98		0.0005
				2128	2.4000	1.26		55.20
				2133	4.8003	1.66		0.0021
				2137	1.5000	1.76		105.30
				2139	0.8998	1.79		627.30
				2142	0.4000	1.81		0.0112
				2157	0.0800	1.83		1157.70
				2206	0.1333	1.85		0.0294
								1498.20
				2226	0.0300	1.86		0.0566
				2316	0.0	1.86		1999.60
				2334	0.0333	1.87		0.1363
				2400	0.0	1.87		2299.90
								2406.80
				5-10	11	0.0545		0.1845
								2275.10
								0.2803
								2105.30
								0.3252
								1885.40
								0.3660
								1623.50
								0.4019
								1321.40
								0.4320
								1157.70
								0.4574
								868.40
								0.4782
								741.90
								0.4947
								627.30
								0.5087
								491.90
								0.5201
								365.10
								0.5377
								18
								260.20
								0.5569
								30
								235.20
								0.5671
								209.80
								0.5808
								186.20
								0.5889
								118
								137.90
								0.5988

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.

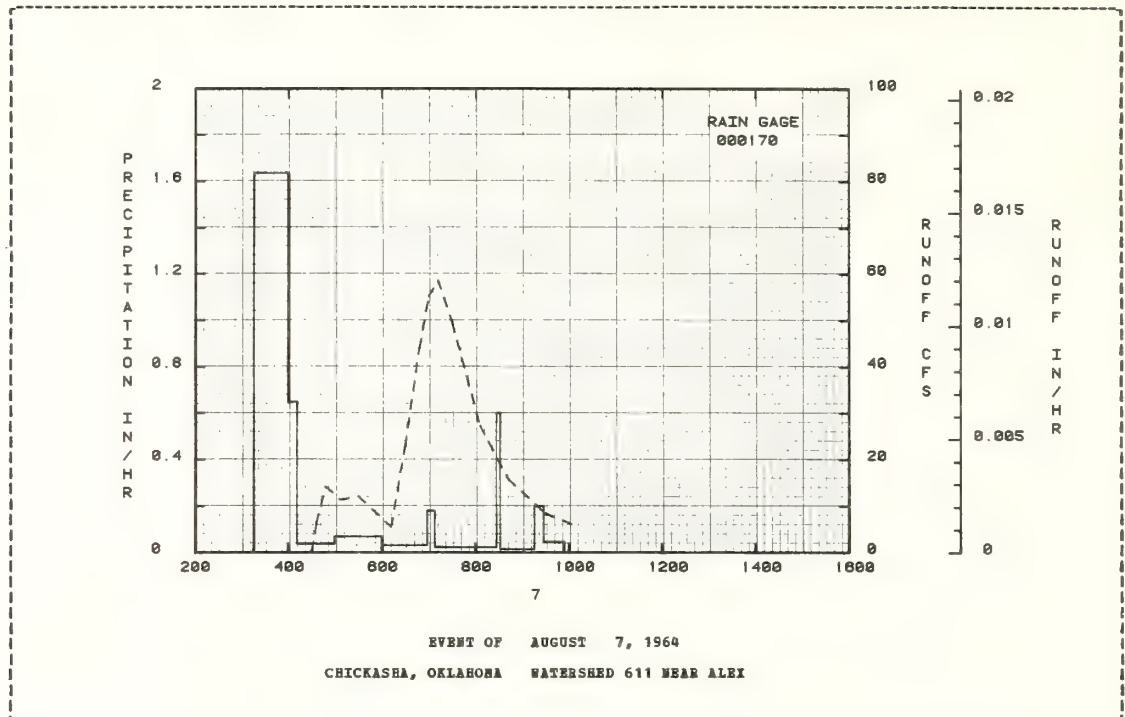


EVENT OF MAY 9 - 10, 1964
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

1964 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF AUGUST 7, 1964										
8-7	RG 000170	0.0	8-7	RG 000170			8-7			
	0.0	0.0		315	0.0	0.0		424	0.0	0.0
				359	1.6364	1.20		430	0.23	0.0
				411	0.6500	1.33		436	6.35	0.0001
				459	0.0375	1.36		442	10.13	0.0003
				600	0.0689	1.43		448	14.23	0.0005
				658	0.0310	1.46		506	11.40	0.0013
				708	0.1800	1.49		530	12.07	0.0023
				827	0.0228	1.52		612	5.46	0.0036
				832	0.6000	1.57		630	23.00	0.0045
				916	0.0136	1.58		648	44.06	0.0065
				928	0.2000	1.62		700	55.38	0.0086
				954	0.0462	1.64		712	58.64	0.0109
								730	49.43	0.0142
								806	27.24	0.0189
								842	15.79	0.0215
								930	8.38	0.0235
								1012	5.46	0.0245

WATERSHED CONDITIONS:
The land use of this 7.57 sq. mi. watershed is not monitored seasonally. For a general description of the watershed cover, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.7-1.

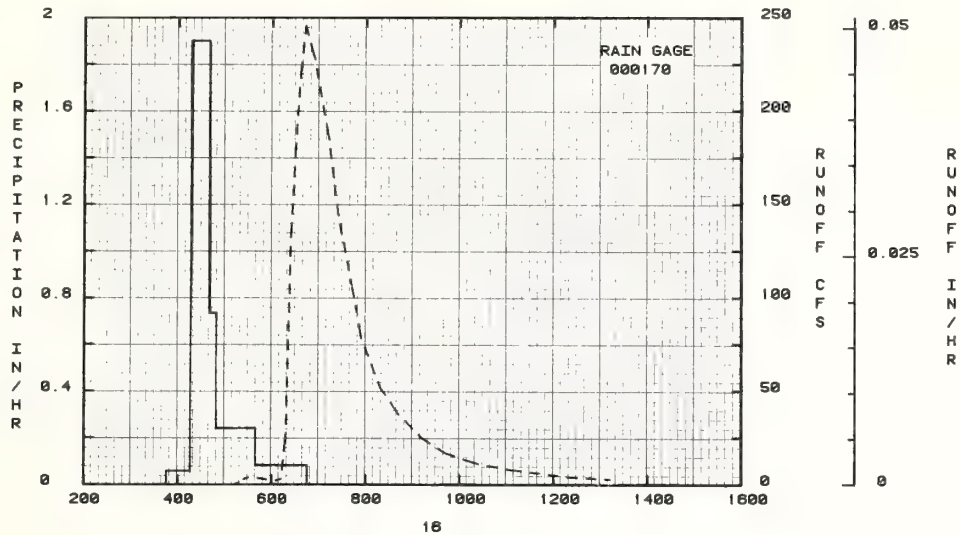
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



1964 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 16, 1964										
9-16	RG 000170	0.001	9-16	345	0.0	0.0	9-16	512	0.0	0.0
	0.0			416	0.0581	0.03		518	0.97	0.0
				440	1.9000	0.79		524	2.81	0.0
				449	0.7333	0.90		530	3.75	0.0001
				539	0.2400	1.10		542	3.26	0.0002
				645	0.0818	1.19		606	2.03	0.0004
								612	2.95	0.0005
								618	27.24	0.0008
								624	134.95	0.0025
								630	182.67	0.0058
								636	221.34	0.0098
								642	245.45	0.0147
								654	227.23	0.0243
								712	184.42	0.0370
								724	143.81	0.0437
								742	105.30	0.0514
								754	77.84	0.0551
								818	51.85	0.0604
								842	37.02	0.0641
								912	24.54	0.0673
								942	16.60	0.0694
								1024	10.75	0.0714
								1106	7.58	0.0727
								1218	3.92	0.0741
								1312	2.67	0.0747

WATERSHED CONDITIONS:
The land use of this 7.57 sq. mi. watershed is not monitored seasonally. For a general description of the watershed cover, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.7-1.

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.

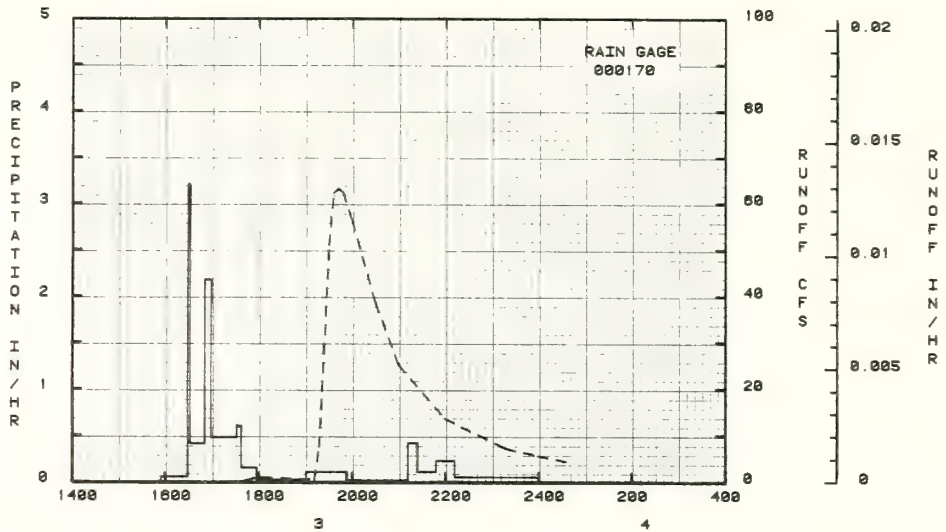


EVENT OF SEPTEMBER 16, 1964

CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

1964 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	(inches)	No-Day	of Day	(cfs)	(inches)
EVENT OF NOVEMBER 3 - 4, 1964										
11- 3	0.0	0.004	11- 3	1555	0.0	0.0	11- 3	1736	0.0	0.0
				1629	0.0529	0.03		1742	0.12	0.0
				1632	3.1998	0.19		1754	0.70	0.0
				1651	0.4105	0.32		1806	0.83	0.0
				1659	2.1750	0.61		1830	0.64	0.0001
WATERSHED CONDITIONS: The land use of this 7.57 sq. mi. watershed is not monitored seasonally. For a general description of the watershed cover, see Hydrologic Data for Experimental Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.7-1.				1732	0.4727	0.87		1854	0.43	0.0001
				1738	0.6000	0.93		1912	0.43	0.0001
				1758	0.1500	0.98		1918	7.58	0.0002
				1901	0.0190	1.00		1924	27.80	0.0006
				1954	0.1019	1.09		1930	51.04	0.0014
				2112	0.0154	1.11		1936	62.22	0.0025
				2125	0.4154	1.20		1942	63.13	0.0038
				2148	0.1043	1.24		1948	62.22	0.0051
				2212	0.2250	1.33		2000	56.03	0.0076
				2400	0.0500	1.42		2030	38.37	0.0124
								2100	25.07	0.0156
								2200	13.49	0.0195
								2318	7.08	0.0222
								2400	5.46	0.0231
			11- 4	42				42	4.09	0.0238

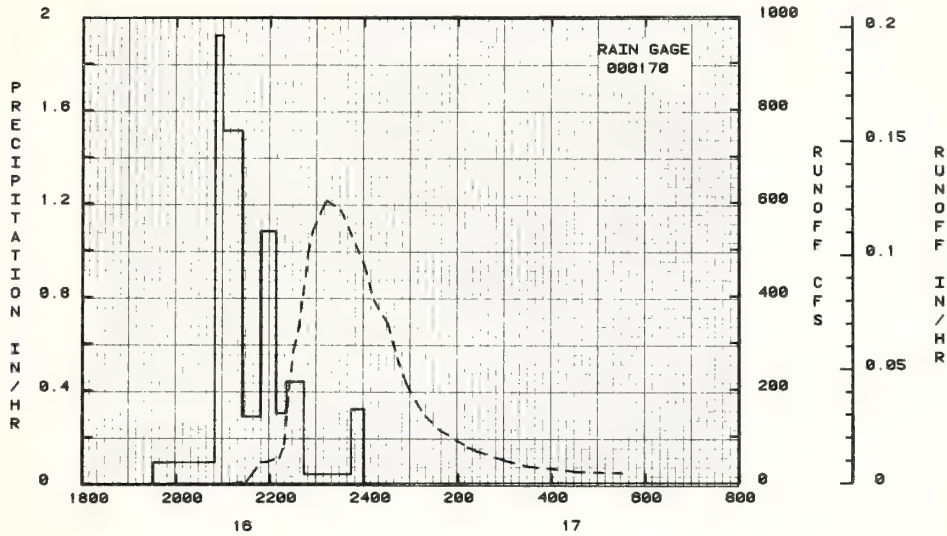
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



EVENT OF NOVEMBER 3 - 4, 1964
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

1964 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF NOVEMBER 16 - 17, 1964										
RG 000170			RG 000170							
11-16	0.0	0.000	11-16	1930	0.0	0.0	11-16	2100	0.01	0.0
				2049	0.0911	0.12		2112	0.08	0.0
				2059	1.9201	0.44		2130	5.05	0.0002
				2124	1.5120	1.07		2136	17.44	0.0004
				2147	0.2870	1.18		2148	45.56	0.0017
WATERSHED CONDITIONS: The land use of this 7.57 sq. mi. watershed is not monitored seasonally. For a general description of the watershed cover, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69-7-1.				2207	1.0800	1.54		2154	45.56	0.0026
				2221	0.3000	1.61		2212	55.18	0.0057
				2243	0.4364	1.77		2218	84.24	0.0071
				2343	0.0400	1.81		2224	200.53	0.0101
				2400	0.3176	1.90		2230	286.72	0.0152
								2236	329.41	0.0214
								2242	403.00	0.0290
								2248	491.88	0.0379
								2254	540.34	0.0486
								2306	588.06	0.0716
								2312	605.69	0.0840
								2330	584.57	0.1206
								2400	467.14	0.1744
							11-17	12	391.94	0.1919
								30	341.91	0.2145
								42	268.88	0.2270
								54	211.73	0.2368
								106	174.12	0.2447
								118	143.81	0.2512
								136	114.26	0.2591
								212	76.80	0.2709
								224	67.83	0.2738
								300	47.86	0.2809
								330	35.05	0.2851
								430	24.02	0.2911
								536	20.57	0.2961

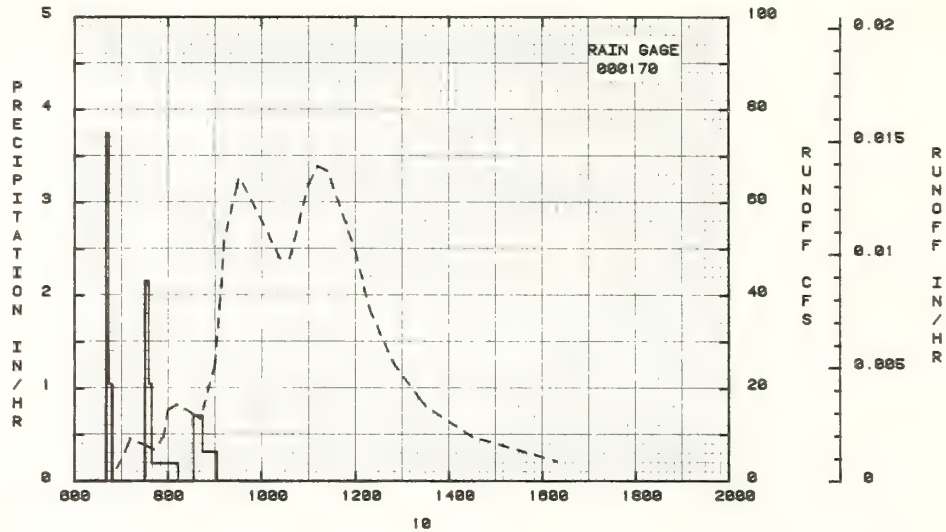
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



EVENT OF NOVEMBER 16 - 17, 1964
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

1967 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 10, 1967										
RG 000170			RG 000170							
4-10	0.0	0.020	4-10	640	0.0	0.0	4-10	654	2.81	0.0
				644	3.7500	0.25		700	4.65	0.0001
				648	1.0500	0.32		712	9.23	0.0004
				730	0.0	0.32		742	6.83	0.0012
				735	2.1600	0.50		754	9.52	0.0015
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 3%; row crop - 5%; alfalfa - 2%; pasture and range - 90%.				739	1.0500	0.57		800	15.39	0.0018
				813	0.1941	0.68		812	16.60	0.0025
				833	0.0	0.68		842	13.49	0.0040
				844	0.7091	0.81		900	25.07	0.0052
				903	0.3158	0.91		906	37.69	0.0058
				1025	0.0073	0.92		912	51.85	0.0067
							930	64.99	0.0103	
							936	64.06	0.0116	
							1024	47.86	0.0208	
							1036	47.86	0.0228	
							1100	64.06	0.0274	
							1112	67.83	0.0301	
							1124	66.88	0.0329	
							1200	49.43	0.0400	
							1218	37.02	0.0427	
							1248	25.60	0.0459	
							1330	16.19	0.0489	
							1430	9.52	0.0515	
							1618	4.28	0.0540	

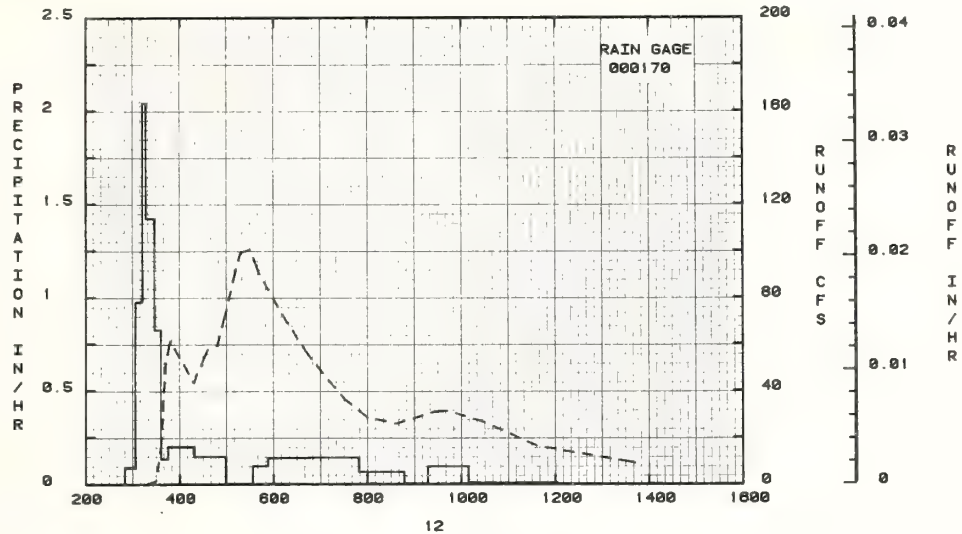
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



EVENT OF APRIL 10, 1967
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

1967 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 12, 1967										
4-12	RG 000170 0.0	0.000	4-12	RG 000170 250	0.0	0.0	4-12	318	0.10	0.0
				304	0.0857	0.02		330	1.59	0.0
				312	0.9750	0.15		336	15.79	0.0002
				317	2.0400	0.32		342	51.85	0.0009
				328	1.4182	0.58		348	61.31	0.0021
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 3%; row crop - 3%; alfalfa - 2%; pasture and range - 90%.				336	0.8250	0.69		418	43.32	0.0075
				345	0.1333	0.71		436	57.76	0.0106
				418	0.2000	0.82		448	59.52	0.0130
				459	0.1463	0.92		500	74.75	0.0158
				534	0.0	0.92		512	92.10	0.0192
				553	0.0947	0.95		518	99.17	0.0242
				645	0.1385	1.07		530	100.38	0.0253
				749	0.1406	1.22		542	89.81	0.0292
				847	0.0621	1.28		618	68.80	0.0389
				917	0.0	1.28		648	53.50	0.0452
				1009	0.0923	1.36		730	36.35	0.0516
				1202	0.0053	1.37		800	28.36	0.0549
								836	25.60	0.0582
								924	30.69	0.0628
								942	31.30	0.0647
								1030	26.14	0.0694
								1136	16.19	0.0742
								1342	8.94	0.0796

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



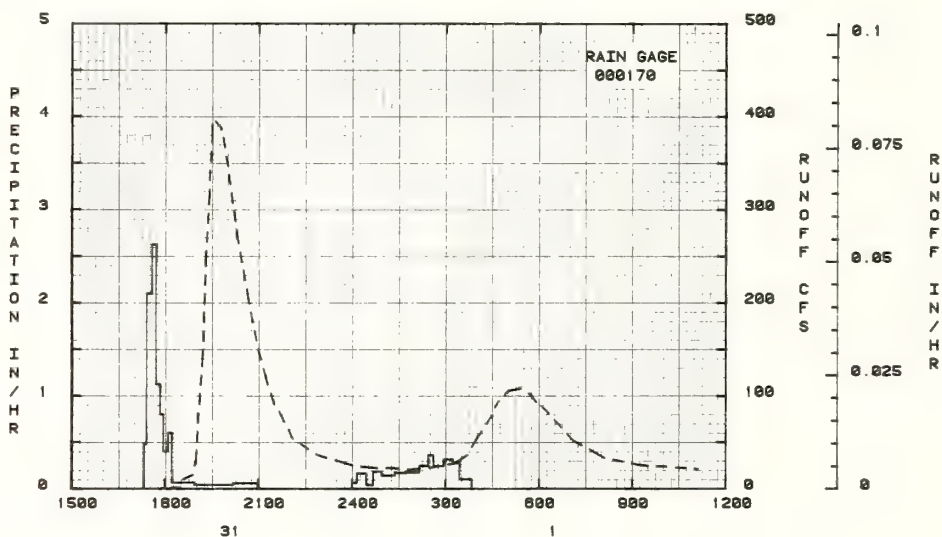
EVENT OF APRIL 12, 1967
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

1968 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 31 - JUNE 1, 1968											
RG 000170			RG 000170								
5-31	0.0	0.001	5-31	1720	0.0	0.0	5-31	1748	0.17	0.0	
				1725	0.4800	0.04		1754	0.76	0.0	
				1735	2.0999	0.39		1830	1.30	0.0001	
				1743	2.6250	0.74		1836	10.44	0.0002	
				1751	1.1250	0.89		1854	15.39	0.0010	
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 3%; row crop - 5%; alfalfa - 2%; pasture and range - 90%.											
				1757	0.8000	0.97		1900	31.30	0.0015	
				1806	0.4000	1.03		1906	92.10	0.0028	
				1813	0.6000	1.10		1912	139.34	0.0052	
				1857	0.0682	1.15		1918	245.45	0.0091	
				2012	0.0400	1.20		1924	312.39	0.0148	
				2059	0.0638	1.25		1930	391.94	0.0220	
				2400	0.0033	1.26		1936	394.69	0.0300	
			6- 1	9	0.0667	1.27		1948	386.48	0.0460	
				27	0.1667	1.32		2000	346.98	0.0610	
				41	0.0429	1.33		2018	273.27	0.0800	
				57	0.1875	1.38		2042	198.70	0.0993	
				122	0.1440	1.44		2100	148.36	0.1100	
				143	0.1714	1.50		2118	111.66	0.1180	
				210	0.1778	1.58		2130	90.95	0.1222	
				227	0.2471	1.65		2142	81.00	0.1257	
				237	0.3600	1.71		2206	53.50	0.1312	
				257	0.2400	1.79		2254	36.35	0.1386	
				314	0.3176	1.88		2400	25.07	0.1455	
				327	0.2769	1.94	6- 1	48	22.01	0.1494	
				351	0.1000	1.98		112	22.01	0.1512	
								130	21.05	0.1525	
								154	20.57	0.1542	
								230	22.50	0.1568	
								318	27.80	0.1609	
								342	36.35	0.1635	
								400	53.50	0.1663	
								430	78.88	0.1731	
								436	87.56	0.1748	
								442	94.42	0.1767	
								500	105.30	0.1828	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.

1968			SELECTED RUNOFF EVENT				CHICKASHA, OKLAHOMA				WATERSHED 611 NEAR ALEX			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.				
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)				
			EVENT OF		MAY 31 -	JUNE 1, 1968	(CONTINUED)							
							6- 1	524	107.82	0.1915				
								542	101.60	0.1979				
								554	93.26	0.2019				
								606	88.68	0.2056				
								618	81.00	0.2091				
								706	51.85	0.2200				
								806	33.14	0.2287				
								912	25.60	0.2353				
								1106	21.05	0.2444				

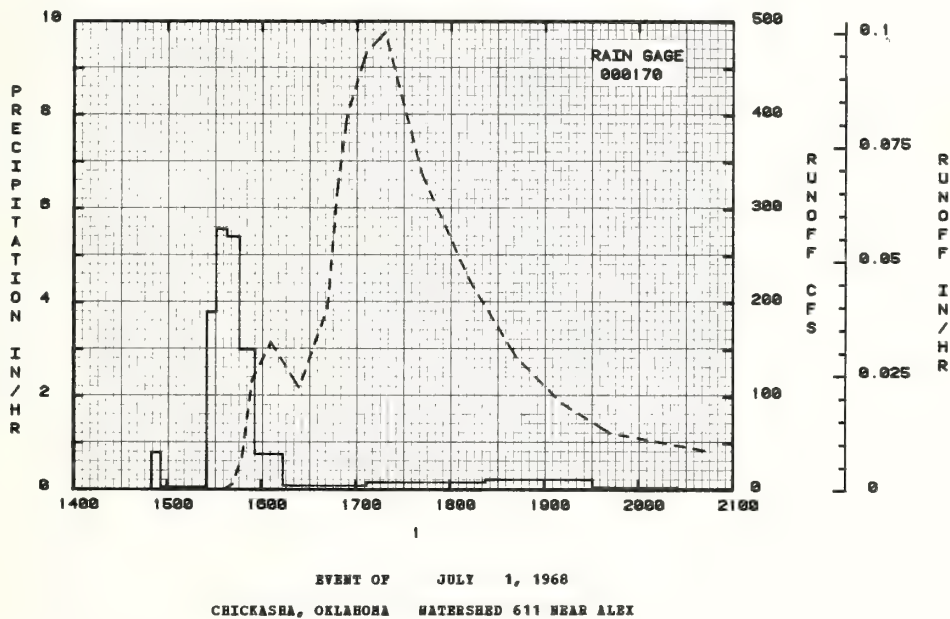
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



EVENT OF MAY 31 - JUNE 1, 1968
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

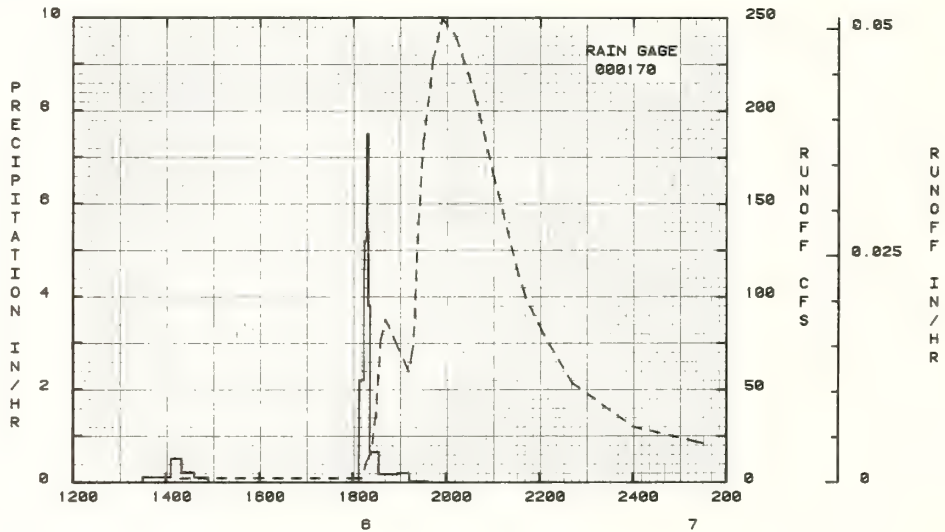
1968 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 1, 1968										
RG 000170			RG 000170							
7- 1	0.0	0.000	7- 1	1450	0.0	0.0	7- 1	1536	0.05	0.0
				1456	0.8000	0.08		1542	6.83	0.0001
				1525	0.0621	0.11		1548	36.35	0.0005
				1531	3.8000	0.49		1554	116.90	0.0021
				1538	5.5714	1.14		1606	157.73	0.0077
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 3%; row crop - 5%; alfalfa - 2%; pasture and range - 90%.				1546	5.4000	1.86	1624	109.09	0.0159	
				1556	3.0000	2.36	1642	195.07	0.0253	
				1614	0.7667	2.59	1648	322.05	0.0305	
				1707	0.0906	2.67	1654	400.21	0.0380	
				1823	0.1737	2.89	1706	467.14	0.0557	
				1931	0.2294	3.15	1718	488.74	0.0752	
				2025	0.0667	3.21	1742	336.88	0.1092	
						1812	225.25	0.1380		
						1842	142.31	0.1568		
						1912	92.10	0.1688		
								1942	61.31	0.1767
								2042	42.59	0.1873

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MAY 6 - 7, 1969										
RG 000170			RG 000170							
5- 6	0.0	0.007	5- 6	1330	0.0	0.0	5- 6	1418	2.03	0.0
				1407	0.1135	0.07		1430	2.40	0.0001
				1420	0.5077	0.18		1454	2.40	0.0003
				1437	0.2118	0.24		1630	2.40	0.0011
				1455	0.1000	0.27		1812	2.27	0.0019
WATERSHED CONDITIONS:				1808	0.0	0.27		1818	11.08	0.0020
From a 1967 survey; sowed				1814	2.2002	0.49		1824	16.19	0.0023
crop - 3%; row crop - 5%;				1817	5.1997	0.75		1830	37.69	0.0029
alfalfa - 2%; pasture and				1819	7.4984	1.00		1836	76.80	0.0041
range - 90%.				1822	3.8009	1.19		1842	87.56	0.0058
				1834	0.6500	1.32		1900	70.75	0.0107
				1858	0.1750	1.39		1912	59.52	0.0134
				1913	0.2000	1.44		1918	73.74	0.0148
				1937	0.0250	1.45		1924	139.34	0.0170
								1930	182.67	0.0203
								1942	227.23	0.0287
								1954	249.62	0.0385
								2012	239.28	0.0535
								2036	207.96	0.0718
								2100	165.80	0.0871
								2130	115.58	0.1015
								2142	99.17	0.1059
								2206	78.88	0.1132
								2242	53.50	0.1213
								2400	30.10	0.1324
							5- 7	130	21.05	0.1403

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002047.



EVENT OF MAY 6 - 7, 1969
CHICKASHA, OKLAHOMA WATERSHED 611 NEAR ALEX

CHICKASHA, OKLAHOMA WATERSHED 612 NEAR ALEX

LOCATION: Little Dry Creek Watershed above State Road 19 bridge in Grady County, Okla.; tributary to Big Dry Creek, Washita River; Red River Basin. GAGING STATION--NW1/4 sec. 33, T. 6 N., R. 6 W., lat. 35 deg. 57 min., long. 97 deg. 51 min., 5 miles Northwest of Alex, Okla.; on state road 19 bridge over little Dry Creek.

AREA: 563.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 612 NEAR ALEX															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	1.62	2.43	2.28	1.39	3.79	2.00	0.55	2.30	5.49	1.28	0.15	1.48	24.72															
	Q	0.043	0.055	0.086	0.013	0.242	0.078	0.0	0.000	0.340	0.0	0.0	0.001	0.859															
STA AV	P	1.15	1.26	1.58	2.89	3.72	2.70	2.24	2.62	3.89	1.56	2.10	0.95	26.65															
	Q	0.108	0.075	0.077	0.204	0.136	0.231	0.102	0.010	0.139	0.020	0.032	0.124	1.258															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		9-21	0.325	9-21	0.248	9-21	0.312	9-21	0.322	9-21	0.323	9-21	0.322	9-21	0.323	9-15	0.340												
MAXIMUMS FOR PERIOD OF RECORD																													
		7- 1	0.493	6-23	0.345	6-23	0.549	6-23	0.733	6-23	0.756	6-23	0.756	6-23	0.756	6-23	0.785												
		1968		1963		1963		1963		1963		1963		1963		1963													

NOTES: Watershed conditions: From a 1967 survey; alfalfa - 17%; and pasture and range 83%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.8-5 (Topography) and p. 69.7-9 (Geologic); 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 2 gages on the watershed. Precipitation records began Oct. 1961; runoff records began Nov. 1961. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)						CHICKASHA, OKLAHOMA WATERSHED 612 NEAR ALEX							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.58	0.19	0.0	0.0	0.0	
3	0.0	0.0	0.05	0.0	0.38	0.0	0.0	0.0	0.02	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.22	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.10	0.0	0.24	0.0	0.0	0.0	0.0	0.03	0.0	0.77	
6	0.0	0.0	0.0	0.0	1.38	0.0	0.0	0.0	0.0	0.22	0.0	0.02	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.09	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.07	0.35	0.0	0.0	0.0	0.0	0.34	0.0	0.0	
13	0.0	0.42	0.0	0.05	0.02	0.50	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.92	0.06	0.0	0.01	1.19	0.0	0.0	0.06	0.0	0.0	0.0	
15	0.0	0.02	0.04	0.0	0.01	0.0	0.0	0.28	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.52	0.63	0.0	0.0	0.0	1.23	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.58	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.06	
21	0.0	0.27	0.0	0.0	0.0	0.0	0.01	0.0	3.35	0.0	0.0	0.0	
22	0.0	0.0	0.25	0.0	0.0	0.0	0.04	0.16	0.55	0.13	0.0	0.0	
23	0.0	0.22	1.24	0.13	0.0	0.0	0.0	0.07	0.0	0.14	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.01	0.22	0.81	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.59	0.0	0.0	0.15	0.0	0.0	0.0	0.15	0.0	
27	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.18	0.0	0.12	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.30	
29	1.55		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.26	
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	
31	0.07		0.0		0.0		0.0	0.0		0.0		0.0	
TOTAL	1.62	2.43	2.24	1.39	3.79	2.00	0.55	2.30	5.49	1.28	0.15	1.48	
STA AV	1.15	1.26	1.58	2.89	3.72	2.70	2.24	2.62	3.89	1.56	2.10	0.95	

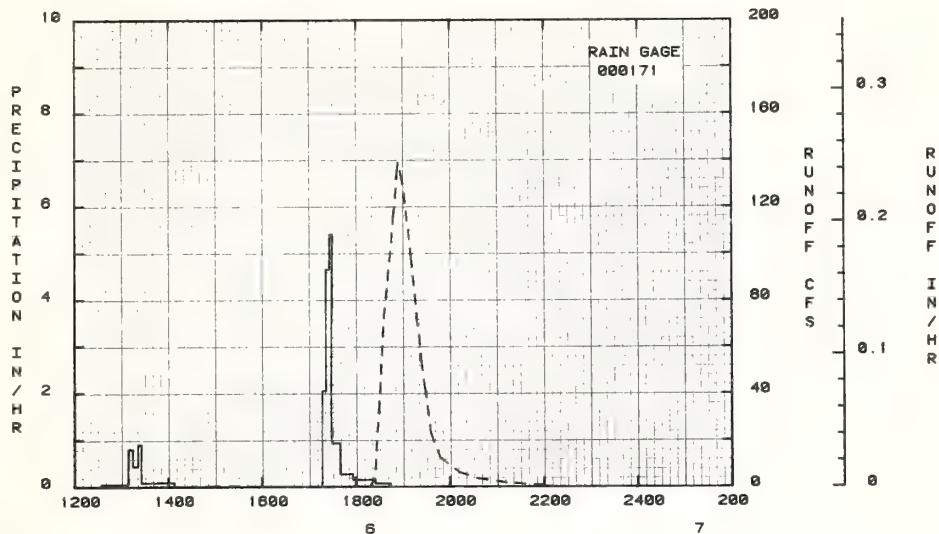
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69-007) of this publication. Precipitation values are a Thiessen weighted average of 2 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 612 NEAR ALEX												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0
3	0.0	0.0	0.100	0.0	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.100	0.0	0.109	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.100	0.0	0.285	0.0	0.0	0.0	0.0	0.0	0.0	0.033
6	0.0	0.0	0.100	0.0	4.584	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.100	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.057	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.300	0.0	0.0	0.0	1.090	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.100	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.038	0.117	0.100	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.100	0.100	0.0	0.0	0.406	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.100	0.100	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.100	0.100	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.219	0.0	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.163	0.0	0.0	0.0	0.100	0.0	0.0	7.614	0.0	0.0	0.0
22	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.024	0.0	0.0	0.0
23	0.0	0.111	0.834	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0
24	0.0	0.100	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.100	0.100	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0
26	0.0	0.100	0.100	0.163	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	1.021		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0329	0.0462	0.0656	0.0100	0.1844	0.0616	0.0	0.0003	0.2684	0.0	0.0	0.0011
INCHES	0.043	0.055	0.086	0.013	0.242	0.078	0.0	0.000	0.340	0.0	0.0	0.001
STA AV	0.108	0.075	0.077	0.204	0.136	0.231	0.102	0.010	0.139	0.020	0.032	0.124

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.04228. To convert discharge in inches to AC-FT, multiply by 46.92. STA AV based on 9 yr (1961-69) record period.

1969			SELECTED RUNOFF EVENT								CHICKASHA, OKLAHOMA				WATERSHED 612 NEAR ALEX			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF											
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.								
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)								
EVENT OF											MAY 6, 1969							
RG 000171			RG 000171															
5- 6	0.0	0.0	5- 6	1235	0.0	0.0	5- 6	1400	0.0	0.0								
				1309	0.0529	0.03		1424	0.10	0.0								
				1315	0.8000	0.11		1436	0.50	0.0001								
				1322	0.4286	0.16		1448	0.30	0.0002								
				1326	0.9000	0.22		1506	0.30	0.0004								
WATERSHED CONDITIONS:					1348	0.0818	0.25		1600	0.10	0.0007							
From a 1967 survey; alfalfa					1408	0.0900	0.28		1818	0.10	0.0011							
- 17%; and pasture and range					1717	0.0032	0.29		1824	3.40	0.0014							
- 83%.					1722	2.0401	0.46		1830	36.40	0.0049							
				1726	4.6501	0.77		1836	72.60	0.0145								
				1729	5.3997	1.04		1842	92.60	0.0291								
				1740	0.9273	1.21		1848	115.80	0.0474								
				1756	0.2625	1.28		1854	138.80	0.0698								
				1825	0.1448	1.35		1900	129.60	0.0935								
				1844	0.0632	1.37		1912	94.00	0.1329								
								1918	72.60	0.1476								
								1924	53.70	0.1587								
								1930	38.20	0.1668								
								1936	22.80	0.1722								
								1948	12.30	0.1784								
								2012	6.10	0.1849								
								2036	3.40	0.1882								
								2112	1.60	0.1908								
								2200	0.60	0.1924								

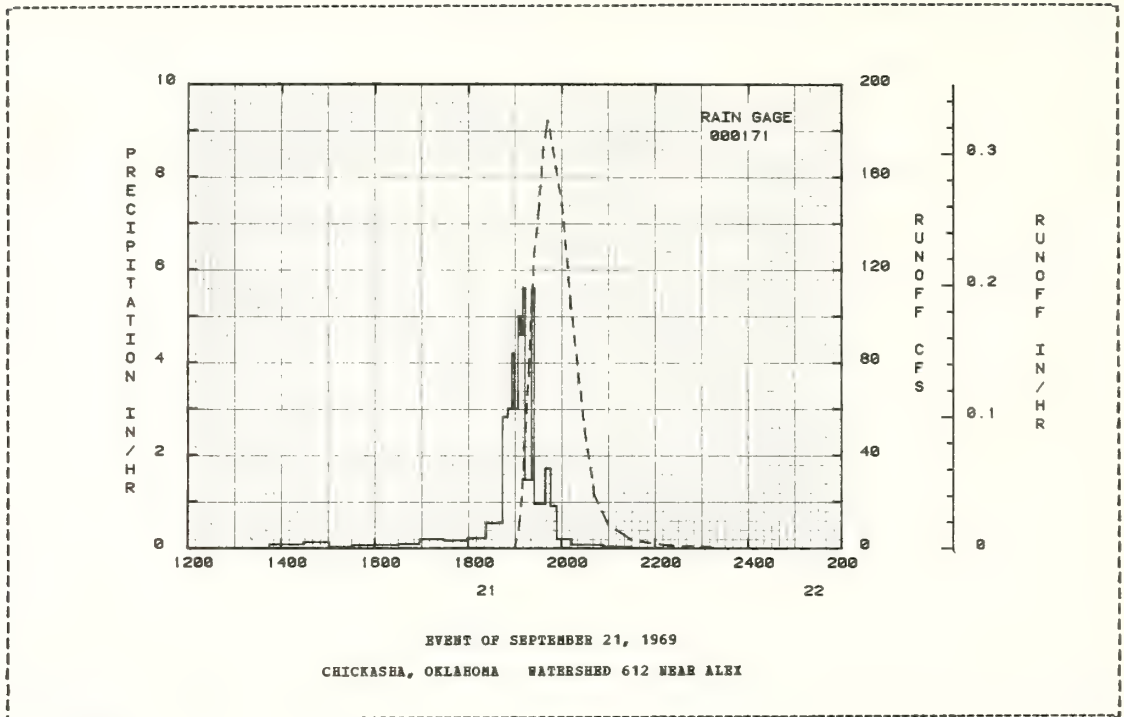
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001762. For Isohyetal map, see p. 69-9-5 of this publication.

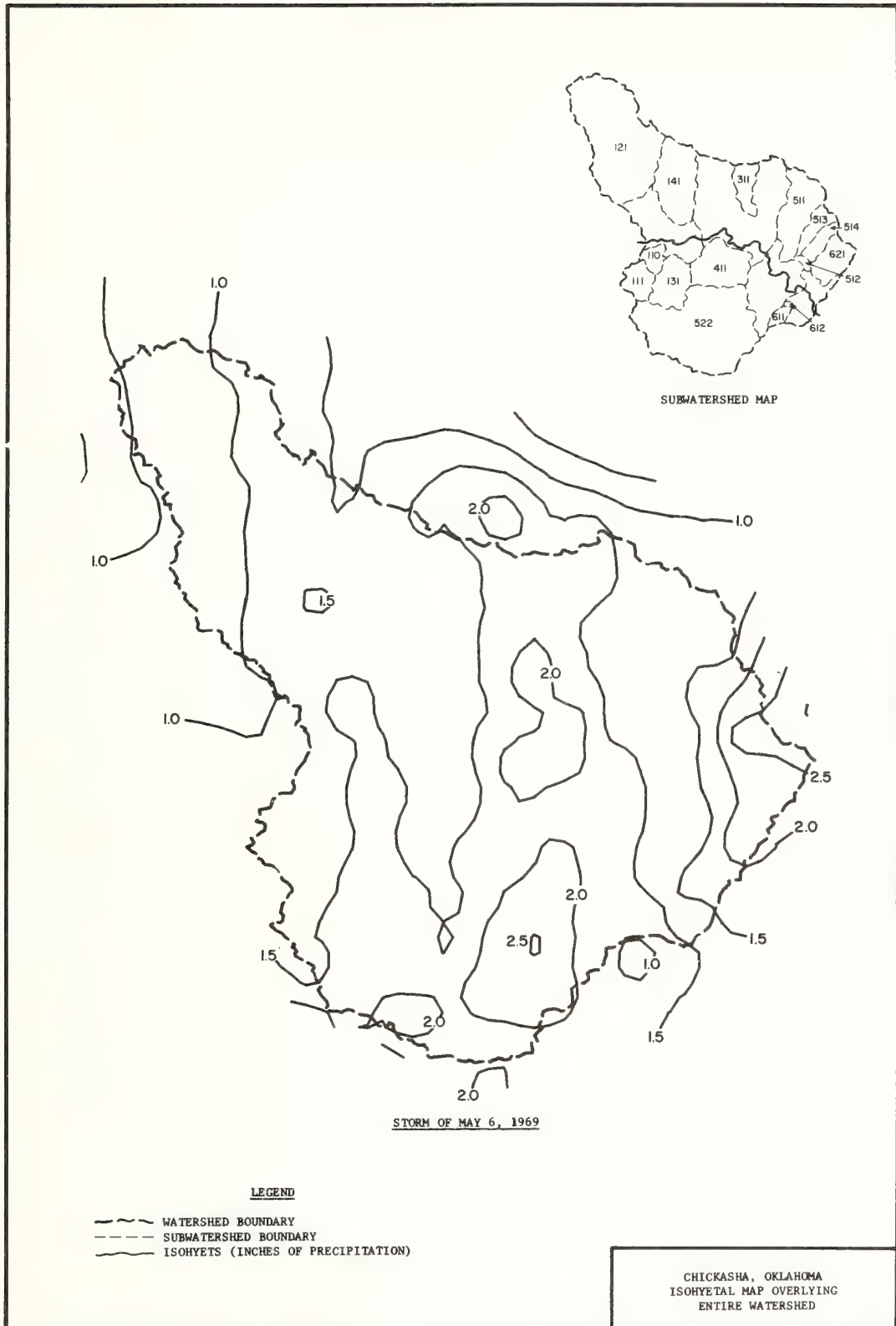


EVENT OF MAY 6, 1969
CHICKASHA, OKLAHOMA WATERSHED 612 NEAR ALEX

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 612 NEAR ALEX						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF SEPTEMBER 21, 1969									
9-21	0.0	0.0	9-21	1345	0.0	0.0	9-21	1900	0.0
				1429	0.0818	0.06		1906	10.00
				1502	0.1273	0.13		1912	38.20
				1531	0.0207	0.14		1918	77.60
				1559	0.0643	0.17		1924	126.10
WATERSHED CONDITIONS: From a 1967 survey; alfalfa - 17%; and pasture and range - 83%.				1631	0.0750	0.21		1930	144.50
				1658	0.0889	0.25		1936	173.10
				1729	0.1936	0.35		1942	184.20
				1759	0.1600	0.43		2000	148.40
				1823	0.2250	0.52		2012	103.00
				1844	0.5429	0.71		2030	50.30
				1851	2.8285	1.04		2042	22.80
				1856	3.0002	1.29		2100	10.00
				1859	4.2010	1.50		2130	3.40
				1904	2.9996	1.75		2212	1.30
				1907	5.0012	2.00		2312	0.40
				1910	4.5997	2.23			
				1913	5.5997	2.51			
				1922	1.4667	2.73			
				1925	5.5997	3.01			
				1939	0.9428	3.23			
				1946	1.7143	3.43			
				1954	0.9000	3.55			
				2013	0.1895	3.61			
				2054	0.0732	3.66			
				2130	0.0333	3.68			

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001762.





AREA: 16634.00 acres 26.00 sq. miles

NOTES: Watershed conditions. From a 1967 survey; sowed crop - 14%; row crop - 4%; alfalfa - 2%; pasture and range 72%; and miscellaneous 8%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.7-21 and 1962, USDA Misc. Pub. 1070, p. 69.7-9 (Geologic) and p. 69.10-4 (Topography). Precipitation data obtained from a Thiessen weighted average of 6 gages on the watershed. Precipitation records began Oct. 1961; runoff records began June 1962. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

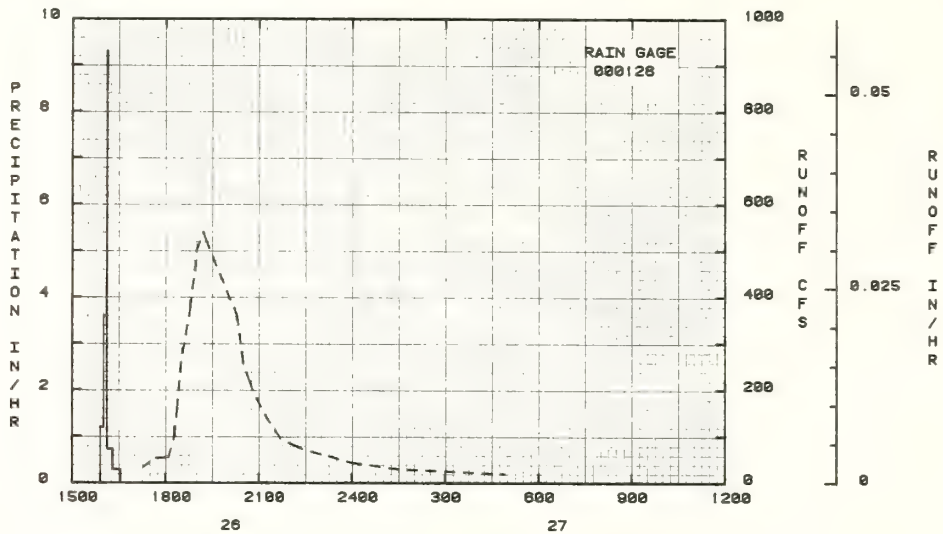
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 6 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 111 NEAR ANADARKO												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.900	2.000	2.200	2.700	2.700	1.300	0.500	0.0	0.0	0.0	0.500	0.700
2	2.200	2.000	3.000	2.600	2.600	1.400	0.500	5.574	0.0	0.0	0.500	0.800
3	2.200	1.700	4.699	2.600	15.668	1.500	0.400	0.500	0.0	0.0	0.500	0.800
4	1.800	1.700	4.400	2.500	10.423	1.500	0.500	0.100	0.0	0.0	0.500	0.800
5	2.000	1.800	3.900	2.100	44.353	1.500	0.200	0.100	0.0	0.0	0.500	0.800
6	2.100	1.900	3.600	2.100	85.167	1.200	0.200	0.200	0.0	0.200	0.500	1.000
7	2.100	1.700	3.200	2.100	29.010	1.100	0.200	0.0 T	0.0	0.300	0.500	0.900
8	1.900	1.500	2.900	2.000	13.001	1.100	0.200	0.0	0.0	0.200	0.500	0.800
9	1.800	1.600	2.500	2.000	9.401	1.200	0.100	0.0	0.0	0.100	0.500	0.800
10	1.700	1.700	2.500	1.800	6.701	1.200	0.100	0.0	0.0	0.100	0.500	0.800
11	1.900	1.800	2.400	1.800	4.901	1.100	0.100	0.0	0.0	0.100	0.500	0.800
12	1.900	1.700	2.500	2.000	20.041	0.900	0.100	0.0	0.0	0.600	0.500	0.800
13	1.900	1.900	2.500	2.100	6.969	5.485	0.0 T	0.0	0.0	0.400	0.500	0.800
14	1.900	4.199	2.400	1.900	5.200	48.336	0.0	0.0	0.0	0.300	0.500	0.800
15	2.100	4.400	2.600	1.700	3.900	3.200	0.0	0.0	0.0	0.300	0.500	0.900
16	2.100	3.000	2.700	22.041	3.800	2.300	0.0	0.0	1.080	0.200	0.500	0.900
17	2.000	2.600	2.600	50.950	3.500	2.100	0.0	0.0	0.0 T	0.200	0.500	0.900
18	1.900	2.300	2.600	5.200	5.312	2.400	0.0	0.0	0.0	0.200	0.500	0.900
19	1.900	2.700	2.500	3.900	3.200	1.700	0.0	0.0	0.0	0.200	0.500	0.900
20	2.000	5.199	2.300	3.900	2.900	1.500	0.0	0.0	0.0	0.300	0.500	0.900
21	1.900	3.601	2.200	2.900	2.600	1.300	0.0	0.0	0.769	0.300	0.600	1.000
22	2.000	3.400	2.300	2.600	2.400	1.100	0.0	0.0	1.120	0.300	0.600	1.000
23	1.900	2.900	8.025	2.300	2.500	1.000	0.0	0.0	1.209	0.500	0.600	0.800
24	1.600	2.900	4.901	2.200	2.300	0.900	0.0	0.0	0.200	0.500	0.600	0.800
25	1.700	3.100	3.201	2.100	2.300	0.800	0.0	0.0	0.200	0.400	0.600	0.800
26	1.800	2.900	2.700	55.879	2.200	0.800	0.100	0.0	0.100	0.400	0.600	0.800
27	1.900	2.600	2.900	13.943	1.800	0.600	0.100	0.0	0.100	0.400	0.700	0.900
28	1.900	2.400	2.700	6.300	1.800	0.600	0.0 T	0.0	0.100	0.500	0.700	0.900
29	1.900		2.600	5.200	1.600	0.500	0.0	0.0	0.100	0.600	0.600	0.800
30	2.000		2.500	3.601	1.600	0.500	0.0	0.0	0.0 T	0.700	0.600	1.100
31	1.800		2.500		1.500		0.0	0.0		0.600		1.200
MEAN	1.9258	2.5428	3.0492	7.1672	9.7209	3.0041	0.1065	0.2089	0.1659	0.2871	0.5400	0.8677
INCHES	0.085	0.102	0.135	0.308	0.431	0.129	0.005	0.009	0.007	0.013	0.023	0.038
STA AV	0.085	0.091	0.103	0.162	0.194	0.073	0.040	0.018	0.056	0.033	0.076	0.069

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.001431. To convert discharge in inches to AC-FT, multiply by 1,386. STA AV based on 8 yr (1962-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 111 NEAR ANADARKO							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 26 - 27, 1969										
RG 000128			RG 000128							
4-26	0.0	0.004	4-26	1555	0.0	0.0	4-26	1718	34.00	0.0
				1601	1.2000	0.12		1730	44.20	0.0005
				1607	3.6003	0.48		1742	53.40	0.0011
				1609	9.2980	0.79		1800	54.40	0.0021
				1619	0.7200	0.91		1806	54.40	0.0024
WATERSHED CONDITIONS:			1634			0.2800	0.98	1818	101.80	0.0033
From a 1967 survey; sowed								1824	178.70	0.0041
crop - 14%; row crop - 4%;								1830	259.80	0.0054
alfalfa - 2%; pasture and								1848	377.50	0.0111
range - 72%; and miscel-								1900	500.30	0.0163
laneous - 8%.								1912	538.30	0.0225
								1924	503.40	0.0287
								2018	359.40	0.0518
								2030	255.60	0.0555
								2048	199.50	0.0596
								2112	145.50	0.0637
								2142	94.40	0.0673
								2224	71.90	0.0708
								2400	42.60	0.0763
							4-27	130	28.60	0.0795
								454	18.00	0.0842

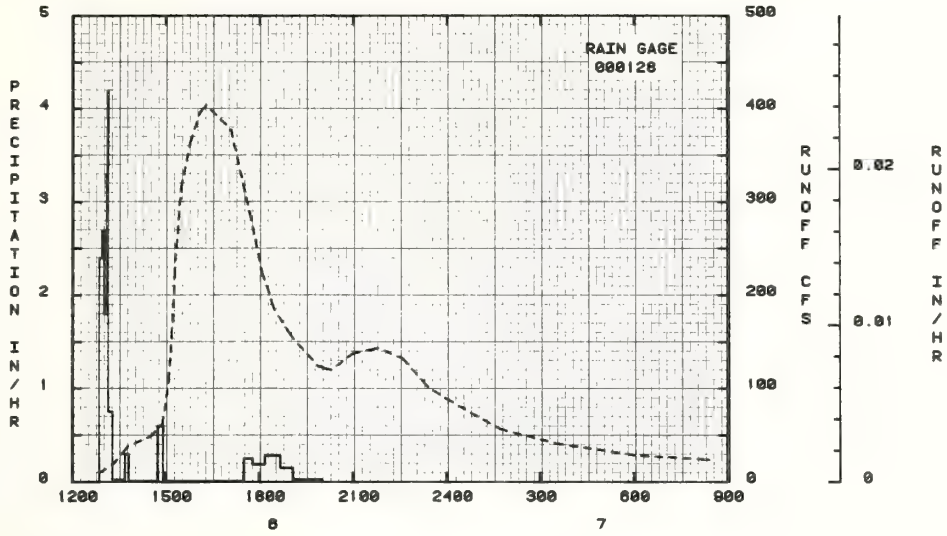
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00005962.



EVENT OF APRIL 26 - 27, 1969
CHICKASHA, OKLAHOMA WATERSHED 111 NEAR ANADARKO

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 111 NEAR ANADARKO							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 5 - 7, 1969										
5- 6	RG 000128 0.0	0.009	5- 6	RG 000128			5- 6			
				1253	0.0	0.0		1254	10.20	0.0
				1258	2.4000	0.20		1318	18.30	0.0003
				1302	2.7000	0.38		1348	38.50	0.0011
				1306	1.8000	0.50		1430	48.70	0.0029
				1308	3.3000	0.61		1454	61.60	0.0042
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 14%; row crop - 4%; alfalfa - 2%; pasture and range - 72%; and miscel- laneous - 8%.				1310	4.2000	0.75		1506	109.70	0.0052
				1318	0.7500	0.85		1512	157.70	0.0060
				1342	0.0250	0.86		1518	229.40	0.0072
				1350	0.3000	0.90		1530	315.40	0.0105
				1445	0.0109	0.91		1548	364.50	0.0166
				1455	0.6000	1.01		1606	396.10	0.0238
				1731	0.0077	1.03		1618	404.20	0.0282
				1748	0.2471	1.10		1706	377.50	0.0468
				1811	0.1826	1.17		1742	287.90	0.0587
				1841	0.2800	1.31		1806	223.60	0.0648
				1905	0.1500	1.37		1830	183.80	0.0697
				2000	0.0218	1.39		1906	153.00	0.0757
								1954	123.10	0.0823
								2018	119.60	0.0852
								2100	137.60	0.0906
								2148	143.30	0.0973
								2236	132.00	0.1039
								2324	101.80	0.1095
								2400	88.70	0.1129
							5- 7	142	56.40	0.1203
								330	40.90	0.1255
								600	28.60	0.1307
								824	23.50	0.1344

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00005962. For Isohyetal map, see p. 69.009-5 of this publication.



EVENT OF MAY 6 - 7, 1969
CHICKASHA, OKLAHOMA WATERSHED 111 NEAR AWADARKO

CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO

LOCATION: Delaware Creek Watershed above County road bridge East of Anadarko in Caddo County, Okla.; tributary to Washita River; Red River Basin. GAGING STATION--NW1/4 sec. 29, T. 7 N., R. 9 W., lat 35 deg. 03 min., long. 98 deg. 10 min., 3 miles East and 1 mile South of Anadarko, Okla., at section line road bridge.

AREA: 25660.00 acres 40.10 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.18	2.08	2.40	2.89	5.29	2.59	0.47	2.97	4.02	1.62	0.21	1.04	25.76			
	Q	0.053	0.089	0.129	0.193	0.421	0.064	0.001	0.002	0.004	0.001	0.005	0.013	0.973			
STA AV	P	0.83	1.21	1.32	2.86	4.11	2.85	1.94	2.66	3.93	1.75	2.33	0.90	26.70			
	Q	0.053	0.068	0.078	0.118	0.170	0.033	0.004	0.003	0.014	0.010	0.030	0.038	0.620			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	Date	6 Hours Vol.	12 Hours Vol.	Date	1 Day Vol.	Date	2 Days Vol.	Date	8 Days Vol.	
1969		4-16	0.021	4-16	0.020	5- 6	0.037	5- 6	0.102	5- 6	0.147	5- 6	0.173	5- 4	0.234	5- 4	0.333
MAXIMUMS FOR PERIOD OF RECORD																	
		5- 9	0.028	5- 9	0.028	5- 9	0.054	5- 9	0.112	5- 6	0.147	5- 6	0.173	5- 4	0.234	5- 4	0.333
		1968		1968		1968		1968		1969		1969		1969		1969	

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 8%; row crop - 4%; alfalfa - 2%; pasture and range - 71%; and miscellaneous - 15%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.11-4 (Topography) and 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 10 gages on the watershed. Precipitation records began Oct. 1961; runoff records began Aug. 1962. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.70	0.0	0.0	0.0	0.0	1.51	0.31	0.0	0.12	0.0		
3	0.0	0.0	0.09	0.0	0.93	0.0	0.0	0.0	0.21	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	1.58	0.0	0.0	0.38	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.10	0.0	0.10	0.0	0.0	0.04	0.0	0.16	0.0	0.0		
6	0.0	0.0	0.0	0.0	1.61	0.0	0.0	0.0	0.0	0.28	0.0	0.0		
7	0.0	0.0	0.05	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.08	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.0	0.02	0.08	0.0	0.0		
12	0.0	0.0	0.0	0.03	0.37	0.0	0.0	0.0	0.0	0.32	0.0	0.0		
13	0.0	0.40	0.0	0.04	0.20	1.73	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.81	0.12	0.0	0.0	0.61	0.0	0.0	0.02	0.0	0.0	0.0		
15	0.01	0.02	0.05	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	1.62	0.06	0.0	0.0	0.0	1.21	0.0	0.0	0.0		
17	0.0	0.01	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.55	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.01	0.0	0.0		
21	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	1.33	0.04	0.0	0.0		
22	0.0	0.0	0.37	0.0	0.0	0.0	0.01	0.22	0.84	0.10	0.0	0.0		
23	0.0	0.10	0.92	0.04	0.0	0.0	0.0	0.01	0.0	0.28	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.01	0.02	0.41	0.34	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	1.16	0.0	0.0	0.04	0.0	0.0	0.0	0.09	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.11	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.31		
29	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.31		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04		
31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.18	2.08	2.40	2.89	5.29	2.59	0.47	2.97	4.02	1.62	0.21	1.04		
STA AV	0.83	1.21	1.32	2.86	4.11	2.85	1.94	2.66	3.93	1.75	2.33	0.90		

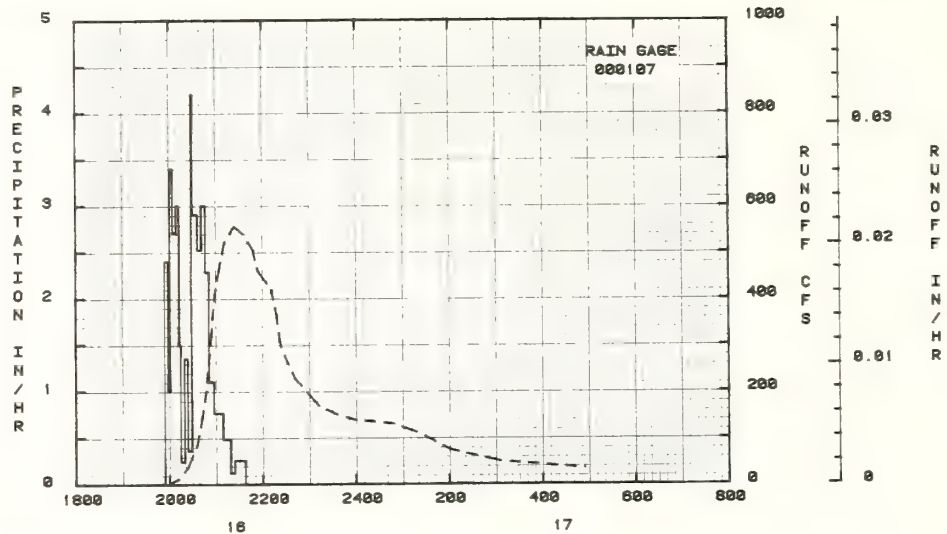
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 10 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.80	1.95	2.50	3.20	1.45	1.10	0.20	0.0	0.0	0.0	0.10	0.30
2	2.05	1.95	2.90	3.10	1.15	1.05	0.20	1.79	0.0	0.0	0.10	0.30
3	2.05	1.95	5.25	2.95	4.90	1.05	0.15	0.35	0.0	0.0	0.15	0.30
4	1.70	2.00	7.40	2.95	14.73	1.15	0.10	0.05	0.0	0.0	0.15	0.30
5	1.80	2.10	7.05	2.65	97.29	1.15	0.10	0.0	0.0	0.0	0.10	0.30
6	2.05	2.00	6.20	2.35	155.15	1.00	0.10	0.0	0.0	0.0	0.10	0.40
7	2.05	1.70	5.35	2.35	48.37	0.80	0.10	0.0	0.0	0.0	0.10	0.45
8	2.10	1.50	4.45	2.35	16.15	0.70	0.05	0.0	0.0	0.0	0.15	0.40
9	1.95	1.40	3.70	2.25	11.40	0.70	0.0	0.0	0.0	0.0	0.15	0.40
10	1.60	1.50	3.30	2.15	7.80	0.75	0.0	0.0	0.0	0.0	0.15	0.40
11	1.50	1.60	3.20	2.10	6.20	0.75	0.0	0.0	0.0	0.0	0.20	0.40
12	1.65	1.55	3.10	2.15	16.15	0.60	0.0	0.0	0.0	0.0	0.15	0.35
13	1.75	1.55	3.00	2.35	8.00	1.43	0.0	0.0	0.0	0.0	0.10	0.30
14	1.75	7.37	2.95	2.45	7.30	33.72	0.0	0.0	0.0	0.0	0.10	0.30
15	1.90	8.04	3.25	2.30	6.45	5.00	0.0	0.0	0.0	0.0	0.10	0.35
16	2.05	4.50	3.65	46.53	5.70	2.95	0.0	0.0	1.37	0.0	0.15	0.40
17	2.05	3.55	3.60	27.23	5.45	2.15	0.0	0.0	0.05	0.0	0.20	0.45
18	1.90	3.00	3.35	5.55	5.10	2.50	0.0	0.0	0.0	0.0	0.20	0.50
19	1.80	2.85	3.10	4.15	4.55	2.35	0.0	0.0	0.0	0.0	0.15	0.50
20	1.90	7.25	2.70	3.20	3.80	1.55	0.0	0.0	0.0	0.0	0.15	0.50
21	1.95	7.20	2.50	2.75	3.40	1.20	0.0	0.0	0.0	0.0	0.20	0.55
22	1.95	6.10	2.65	2.50	3.10	1.00	0.0	0.0	0.88	0.0	0.20	0.55
23	1.85	5.15	17.72	2.35	2.95	0.80	0.0	0.0	1.85	0.0	0.20	0.50
24	1.55	4.45	9.69	2.30	3.00	0.65	0.0	0.0	0.10	0.05	0.20	0.50
25	1.45	4.00	5.35	2.25	2.75	0.55	0.0	0.0	0.0	0.05	0.20	0.50
26	1.60	3.50	4.55	46.12	2.30	0.50	0.0	0.0	0.0	0.0	0.25	0.50
27	1.75	3.10	3.95	14.90	2.10	0.45	0.0	0.0	0.0	0.05	0.30	0.55
28	1.75	2.70	3.60	4.90	2.20	0.35	0.0	0.0	0.0	0.10	0.30	0.60
29	1.80		3.20	3.55	2.05	0.30	0.0	0.0	0.0	0.15	0.30	0.50
30	1.95		2.95	2.25	1.65	0.25	0.0	0.0	0.0	0.20	0.30	0.55
31	1.95		3.00		1.30		0.0	0.0		0.15		0.75
MEAN	1.837	3.411	4.489	6.939	14.641	2.283	0.032	0.071	0.142	0.024	0.173	0.440
INCHES	0.053	0.089	0.129	0.193	0.421	0.064	0.001	0.002	0.004	0.001	0.005	0.013
STA AV	0.053	0.068	0.078	0.118	0.170	0.033	0.004	0.003	0.014	0.010	0.030	0.038

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0009276. To convert discharge in inches to AC-FT, multiply by 2,138. STA AV based on 8 yr (1962-69) record period.

1969	SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 16 - 17, 1969										
RG 000107			RG 000107							
4-16	0.0	0.002	4-16	1955	0.0	0.0	4-16	2000	2.300	0.0
				1959	2.4000	0.16		2012	11.700	0.0001
				2002	0.9999	0.21		2024	37.000	0.0003
				2005	3.3998	0.38		2030	62.700	0.0005
				2009	2.7000	0.56		2036	85.200	0.0008
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 8%; row crop - 4%; alfalfa - 2%; pasture and range - 71%; and miscel- laneous - 15%.				2013	3.0000	0.76		2042	139.800	0.0012
				2015	1.4997	0.81		2048	201.400	0.0019
				2020	0.2400	0.83		2054	315.800	0.0029
				2024	1.3500	0.92		2100	420.200	0.0043
				2029	0.3600	0.95		2106	477.600	0.0060
				2031	4.1991	1.09		2112	522.600	0.0079
				2037	2.9003	1.38		2124	554.500	0.0121
				2042	2.5197	1.59		2136	537.800	0.0163
				2047	3.0002	1.84		2148	503.400	0.0203
				2052	2.2801	2.03		2154	460.100	0.0222
				2058	1.0999	2.14		2206	432.100	0.0256
				2109	0.7636	2.28		2212	417.600	0.0272
				2119	0.4800	2.36		2218	365.000	0.0287
				2124	0.1200	2.37		2224	294.000	0.0300
				2138	0.2571	2.43		2242	226.400	0.0330
							2312	168.000	0.0368	
							2336	148.900	0.0392	
							2400	136.900	0.0414	
							48	129.800	0.0455	
							118	111.000	0.0478	
							142	90.700	0.0494	
							200	73.900	0.0504	
							306	48.000	0.0530	
							454	33.900	0.0558	

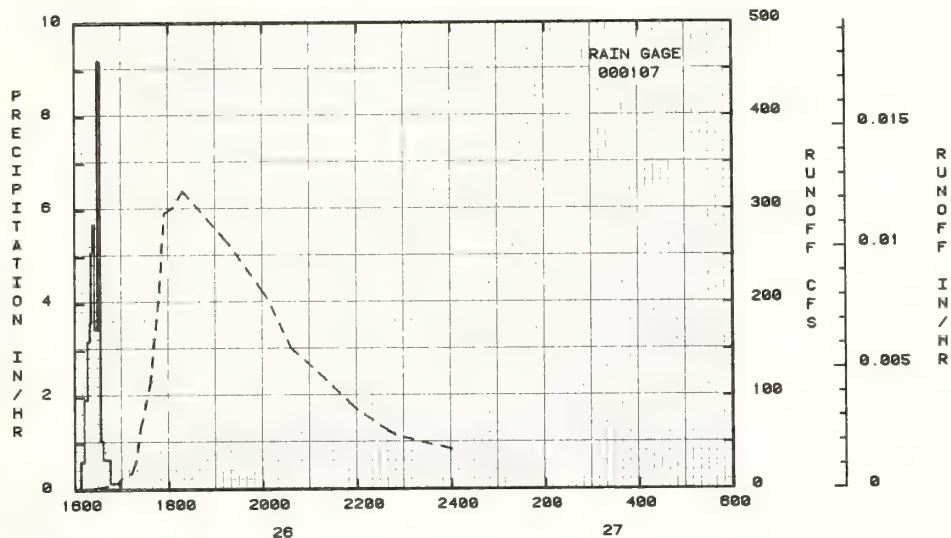
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0003865.



EVENT OF APRIL 16 - 17, 1969
CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF APRIL 26, 1969										
RG 000107			RG 000107							
4-26	0.0	0.002	4-26	1607	0.0	0.0	4-26	1624	2.600	0.0
				1612	0.5999	0.05		1642	5.300	0.0
				1616	1.9500	0.18		1654	8.100	0.0001
				1619	3.1998	0.34		1700	13.900	0.0001
				1621	3.6009	0.46		1712	18.400	0.0002
				1623	5.0989	0.63		1718	32.100	0.0003
				1625	5.7014	0.82		1724	68.100	0.0005
				1629	3.4500	1.05		1736	113.600	0.0012
				1632	9.1994	1.51		1748	214.600	0.0025
				1636	1.0500	1.58		1754	296.400	0.0035
				1645	0.6666	1.68		1806	303.500	0.0058
				1657	0.1500	1.71		1818	320.700	0.0082
								1918	262.100	0.0195
								2006	205.100	0.0267
								2036	151.900	0.0301
								2112	124.200	0.0333
								2200	85.200	0.0365
								2248	58.400	0.0387
								2400	43.000	0.0411

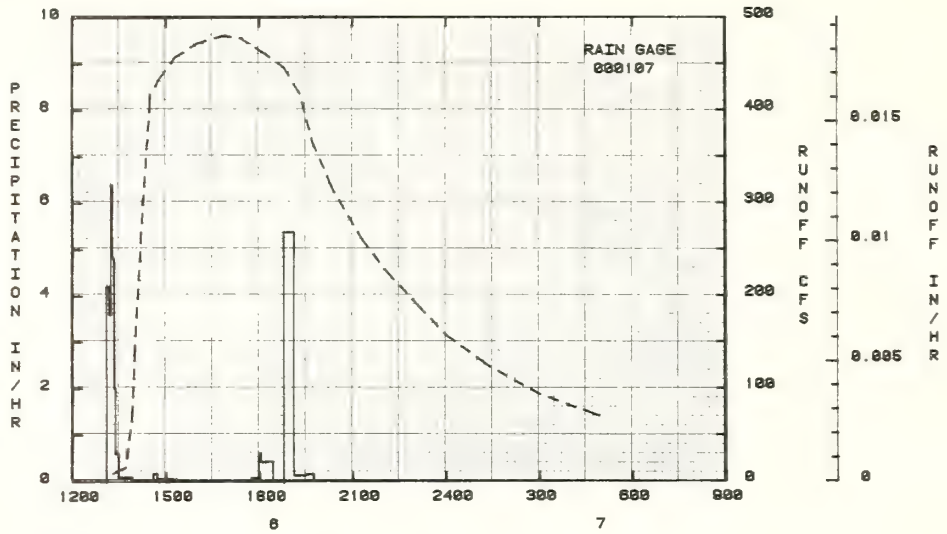
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00003865.



EVENT OF APRIL 26, 1969
CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 131 NEAR ANADARKO					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	Mo-Day	of Day	(cfs)
EVENT OF MAY 6 - 7, 1969								
5- 6	RG 000107 0.0	0.005	5- 6	1305	0.0	5- 6	1318	9.100
				1310	4.2000		1342	15.700
				1314	3.6000		1354	71.000
				1317	6.4000		1400	147.300
				1319	4.7999		1412	268.700
				1322	2.0000		1430	417.600
				1328	0.6000		1448	434.700
				1354	0.0923		1518	457.400
				1435	0.0146		1600	472.200
				1442	0.1714		1648	480.300
				1510	0.0643		1724	477.600
				1521	0.0545		1806	462.800
				1744	0.0		1848	445.400
				1758	0.0857		1918	417.600
				1802	0.6000		1942	365.000
				1812	0.4200		2024	310.800
				1826	0.4286		2118	259.900
				1846	0.0		2206	224.400
				1906	5.3701		2306	188.600
				1929	0.1304		2400	156.700
				1944	0.1600			
						5- 7	124	122.900
							300	93.000
							454	70.000

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00003865. For Isohyetal map, see p. 69.9-5 of this publication.



CHICKASHA, OKLAHOMA WATERSHED 411 AT CHICKASHA

LOCATION: Line Creek Watershed above U.S. Highway 81 bridge at Chickasha, Grady and Caddo Counties, Okla.; tributary to Washita; Red River Basin. GAGING STATION--NE1/4 sec. 29, T. 7 N., R. 7 W., lat. 35 deg. 03 min., long. 97 deg. 58 min., Northwest edge of Chickasha, Okla., at U.S. Highway 81 bridge.

AREA: 33300.00 acres 52.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 411 AT CHICKASHA																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																	
1969	P	0.36	2.07	2.06	1.96	5.86	2.24	0.69	2.26	4.31	1.50	0.17	0.93	24.41																	
	Q	0.001	0.008	0.014	0.026	0.473	0.012	0.006	0.002	0.008	0.002	0.000	0.001	0.552																	
STA AV	P	0.75	1.13	1.33	2.62	3.58	2.91	1.81	2.84	3.85	1.45	2.21	0.89	25.33																	
	Q	0.003	0.005	0.006	0.065	0.087	0.026	0.011	0.050	0.030	0.005	0.032	0.006	0.325																	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																															
		Maximum Discharge				1 Hour		2 Hours		Maximum Volume for Selected Time Interval										2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		5- 6	0.013	5- 6	0.013	5- 6	0.025	5- 6	0.069	5- 6	0.116	5- 6	0.179	5- 5	0.262	5- 4	0.437														
MAXIMUMS FOR PERIOD OF RECORD																															
		8-28	0.060	8-28	0.053	8-28	0.096	8-28	0.204	8-28	0.274	8-28	0.302	8-28	0.316	5- 4	0.437														
		1965		1965		1965		1965		1965		1965		1965		1969															

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 29%; row crop - 4%; alfalfa - 7%; pasture and range - 51%; and miscellaneous - 9%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.12-4 (Topography) and 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 13 gages on the watershed. Precipitation records began Oct. 1961; runoff records began Sept. 1962. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)														CHICKASHA, OKLAHOMA WATERSHED 411 AT CHICKASHA													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec															
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
2	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.96	0.43	0.0	0.04	0.0															
3	0.0	0.0	0.07	0.0	1.23	0.0	0.0	0.01	0.29	0.0	0.0	0.0															
4	0.0	0.0	0.0	0.0	1.61	0.0	0.0	0.27	0.0	0.0	0.0	0.0															
5	0.0	0.0	0.09	0.0	0.18	0.0	0.0	0.02	0.0	0.08	0.0	0.31															
6	0.0	0.0	0.0	0.0	1.68	0.0	0.0	0.0	0.0	0.23	0.0	0.04															
7	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
8	0.0	0.0	0.0	0.0	0.01	0.01	0.0	0.0	0.01	0.0	0.0	0.0															
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
11	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.02	0.06	0.0	0.0															
12	0.0	0.0	0.0	0.04	0.43	0.0	0.0	0.0	0.0	0.41	0.0	0.0															
13	0.0	0.41	0.0	0.08	0.15	1.01	0.0	0.0	0.0	0.0	0.0	0.0															
14	0.0	0.82	0.08	0.0	0.01	0.98	0.0	0.0	0.05	0.0	0.0	0.0															
15	0.01	0.01	0.04	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0															
16	0.0	0.0	0.0	1.05	0.30	0.0	0.0	0.0	1.40	0.0	0.0	0.0															
17	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
18	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0															
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
20	0.0	0.55	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.05															
21	0.0	0.17	0.0	0.0	0.0	0.0	0.04	0.0	0.93	0.03	0.0	0.0															
22	0.0	0.0	0.33	0.0	0.0	0.0	0.06	0.20	1.18	0.08	0.0	0.0															
23	0.0	0.11	0.84	0.11	0.0	0.0	0.0	0.05	0.0	0.30	0.0	0.0															
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
25	0.0	0.0	0.0	0.0	0.0	0.01	0.52	0.41	0.0	0.0	0.0	0.0															
26	0.0	0.0	0.0	0.68	0.0	0.0	0.02	0.01	0.0	0.0	0.13	0.0															
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.10	0.0	0.0															
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24															
29	0.32		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.24															
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05															
31	0.03		0.0		0.0																						
TOTAL	0.36	2.07	2.06	1.96	5.86	2.24	0.69	2.26	4.31	1.50	0.17	0.93															
STA AV	0.75	1.13	1.33	2.62	3.58	2.91	1.81	2.84	3.85	1.45	2.21	0.89															

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 13 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 411 AT CHICKASHA												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0 T	0.50	0.60	0.0 T	0.0	0.19	0.0	0.0	0.0	0.0
2	0.0	0.0	0.52	0.50	0.30	0.0	0.0	1.16	0.29	0.0	0.0	0.0
3	0.0	0.0	0.80	0.50	1.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.40	0.40	2.20	0.0	0.0	0.25	0.0	0.0	0.0	0.0
5	0.20	0.0	0.10	0.0 T	172.54	0.0	0.0	0.06	0.04	0.0	0.0	0.46
6	0.0 T	0.0	0.0 T	0.0	155.01	0.0	0.0	0.10	0.0	0.19	0.0	0.19
7	0.0	0.0	0.23	0.0	206.69	0.0	0.0	0.10	0.0	0.0	0.0	0.0
8	0.0	0.0	0.50	0.0	59.13	0.0	0.0	0.10	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0 T	0.0	12.04	0.0	0.0	0.20	0.0	0.0	0.0	0.0
10	0.0	0.0	0.63	0.0	2.05	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0
11	0.0	0.0	1.20	0.0	0.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	1.00	0.0	3.06	0.0	0.0	0.31	0.0	0.89	0.0	0.0
13	0.0	0.19	0.70	0.30	3.30	0.36	0.0	0.11	0.0	0.01	0.0	0.0
14	0.0	1.88	0.50	0.0 T	2.10	5.77	0.0	0.15	0.03	0.03	0.0	0.0
15	0.0	0.70	0.50	0.0	1.40	7.08	0.0	0.10	0.0	0.06	0.0	0.0
16	0.0	0.0 T	0.50	1.46	1.20	1.82	0.0	0.10	5.62	0.0	0.0	0.0
17	0.0	0.0	0.40	8.84	4.90	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0
18	0.0	0.0	0.30	7.67	1.68	0.72	0.0	0.06	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0 T	1.38	4.79	0.50	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	1.73	0.0	1.05	8.35	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.90	0.0	1.40	6.52	0.0	0.0	0.0	1.43	0.0	0.0	0.0
22	0.0	0.50	0.52	1.30	5.51	0.0	0.0	0.18	2.49	0.00	0.0	0.0
23	0.0	0.0 T	1.99	1.60	1.30	0.0	0.0	0.02	0.76	0.52	0.0	0.0
24	0.0	0.0	1.11	1.30	0.90	0.0	0.0	0.0	0.20	0.11	0.0	0.0
25	0.0	1.80	1.40	1.40	0.60	0.0	0.68	0.08	0.0 T	0.06	0.0	0.0
26	0.0	1.30	1.20	1.56	0.20	0.0	2.40	0.0	0.0	0.0	0.17	0.0
27	0.0	1.00	1.30	1.30	0.60	0.0	2.10	0.04	0.0	0.12	0.0	0.0
28	0.0	0.60	1.30	1.40	0.70	0.0	1.50	0.0	0.0	0.0	0.0	0.0
29	0.83		1.10	1.60	0.50	0.0	0.74	0.0	0.0	0.33	0.0	0.0
30	0.0 T		0.60	1.20	0.70	0.0	0.98	0.0	0.0	0.04	0.0	0.0
31	0.0		0.60		0.40		0.33	0.0		0.05		0.52
MEAN	0.033	0.379	0.626	1.222	21.336	0.541	0.281	0.107	0.362	0.079	0.006	0.038
INCHES	0.001	0.008	0.014	0.026	0.473	0.012	0.006	0.002	0.008	0.002	0.000	0.001
STA AV	0.003	0.005	0.006	0.065	0.087	0.026	0.011	0.050	0.030	0.005	0.032	0.006

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0007148. To convert discharge in inches to AC-FT, multiply by 2,775. STA AV based on 8 yr (1962-69) record period.

CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLE

LOCATION: West Bitter Creek Watershed above U.S. Highway 62 bridge, East of Chickasha in Grady County, Okla.; tributary to Washita River; Red River Basin. GAGING STATION--SW1/4 sec. 29, T. 7 N., R. 6 W., lat. 35 deg. 03 min., long. 97 deg. 51 min., 4 miles East of Chickasha, Okla., at U.S. highway 62 bridge.

AREA: 38020.00 acres 59.40 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLE	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969 P	0.42	2.32	2.17	1.89	4.14	3.92	2.23	3.11	4.90	1.47	0.24	1.21	28.02	
Q	0.039	0.058	0.116	0.199	0.639	0.574	0.051	0.140	0.283	0.031	0.033	0.043	2.205	
STA AV P	0.81	1.17	1.78	2.91	3.07	3.06	1.97	3.58	3.67	1.43	2.15	0.97	26.57	
Q	0.042	0.046	0.093	0.328	0.176	0.146	0.026	0.194	0.186	0.027	0.094	0.049	1.408	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day	
	Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	6-14	0.072	6-14	0.070	6-14	0.137	6-14	0.329	6-14	0.399	6-14	0.434	6-14	0.460
	4-12	0.086	4-12	0.086	4-12	0.169	4-12	0.460	4-12	0.606	4-12	0.670	4-12	0.784
	1967		1967		1967		1967		1967		1967		1967	
MAXIMUMS FOR PERIOD OF RECORD														
	4-12	0.086	4-12	0.086	4-12	0.169	4-12	0.460	4-12	0.606	4-12	0.670	4-12	0.784
	1967		1967		1967		1967		1967		1967		1967	

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 21%; row crop - 5%; alfalfa - 3%; pasture and range - 63%; and miscellaneous - 8%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.13-11 (Topography) and p. 69.7-21 (Composite). Precipitation records began Oct. 1961; runoff records began Oct. 1962. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLE	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.44	0.57	0.0	0.02	0.0		
3	0.0	0.0	0.03	0.0	1.09	0.0	0.0	0.0	0.28	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.03	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.13	0.0	0.34	0.0	0.0	0.0	0.0	0.09	0.0	0.55		
6	0.0	0.0	0.0	0.0	1.32	0.0	0.0	0.0	0.0	0.20	0.0	0.03		
7	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.09	0.04	0.0	0.0		
12	0.0	0.0	0.0	0.04	0.38	0.02	0.0	0.0	0.0	0.40	0.0	0.0		
13	0.0	0.49	0.0	0.06	0.02	0.95	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.94	0.08	0.0	0.0	2.23	0.0	0.0	0.20	0.0	0.0	0.0		
15	0.0	0.01	0.02	0.0	0.0	0.0	0.0	0.57	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.69	0.48	0.0	0.0	0.0	1.87	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.01	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.59	0.0	0.0	0.0	0.0	1.28	0.0	0.0	0.03	0.0	0.08		
21	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.04	0.0	0.0		
22	0.0	0.0	0.40	0.0	0.0	0.0	0.06	1.27	1.30	0.03	0.0	0.0		
23	0.0	0.10	0.99	0.23	0.0	0.0	0.0	0.12	0.0	0.25	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.29	0.69	0.65	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.87	0.0	0.0	0.15	0.0	0.0	0.0	0.22	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.28		
29	0.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.24		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03		
31	0.05	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.42	2.32	2.17	1.89	4.14	3.92	2.23	3.11	4.90	1.47	0.24	1.21		
STA AV	0.81	1.17	1.78	2.91	3.07	3.06	1.97	3.58	3.67	1.43	2.15	0.97		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 15 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA			WATERSHED 511 NEAR TABLER			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.90	2.20	2.70	4.50	7.40	5.40	2.30	0.30	0.40	1.20	2.00	2.00
2	2.10	2.10	2.70	4.70	6.40	5.40	1.90	0.50	0.40	1.10	1.70	2.00
3	2.00	1.90	3.80	4.70	34.42	4.70	1.40	0.40	9.61	1.10	1.70	2.10
4	2.00	1.80	4.70	4.50	86.82	4.70	1.10	0.20	5.58	1.00	1.90	2.10
5	2.10	1.70	4.50	4.30	81.37	4.70	0.90	0.30	1.40	0.90	1.70	2.30
6	2.10	1.70	4.20	4.20	108.78	4.30	0.70	0.20	0.70	1.20	1.60	3.10
7	2.10	1.60	4.80	4.00	349.48	2.70	0.60	0.20	0.40	1.50	1.60	3.40
8	2.20	1.60	4.50	3.80	51.81	2.30	0.40	0.10	0.20	1.70	1.60	2.50
9	2.00	1.70	4.50	4.00	30.40	2.10	0.40	0.10	0.10	2.40	1.60	2.20
10	1.90	1.90	4.20	4.00	29.30	2.30	0.30	0.0 T	0.10	2.20	1.50	2.20
11	1.90	1.70	3.80	3.80	18.50	2.60	0.30	0.0	0.10	2.10	1.50	2.20
12	2.00	1.60	3.70	3.70	24.30	2.20	0.20	0.0	0.20	1.50	1.50	2.10
13	1.90	1.70	4.00	4.20	14.70	2.20	0.10	0.0	0.20	2.80	1.60	2.10
14	1.90	3.50	4.20	4.30	11.60	686.83	0.10	0.0	0.20	2.00	1.30	2.00
15	2.00	6.00	3.80	4.00	10.40	48.42	0.10	0.0	0.10	1.60	1.30	2.00
16	2.10	4.30	4.00	4.20	14.52	19.30	0.10	0.0	123.46	1.60	1.60	2.00
17	2.10	3.30	3.80	33.60	32.78	13.70	0.0 T	0.0	9.23	1.40	2.10	2.00
18	2.10	2.60	3.70	16.70	12.10	12.10	0.0	0.0	3.00	1.30	1.70	2.10
19	2.10	2.30	3.50	10.70	10.20	9.40	0.0	0.0	1.90	1.30	1.50	2.10
20	1.90	4.72	3.50	7.70	9.10	8.90	0.0	0.0	1.30	1.30	1.60	2.10
21	1.90	10.93	3.30	6.20	8.40	7.40	45.08	0.0	1.40	1.30	1.60	2.20
22	1.90	7.70	3.00	5.40	7.70	6.60	5.09	0.0	3.14	1.30	1.70	2.20
23	1.90	5.00	27.81	4.70	8.10	5.60	2.30	197.31	255.03	1.50	1.90	2.10
24	1.70	4.30	29.16	4.80	7.90	5.00	1.80	7.78	17.45	2.00	1.70	2.00
25	1.70	4.20	10.20	4.50	7.90	4.70	2.00	3.80	6.20	1.90	1.80	2.00
26	1.70	3.50	7.70	22.12	7.20	13.20	3.42	5.40	3.50	1.60	1.90	1.90
27	1.80	3.30	6.40	98.43	6.80	12.70	4.54	2.50	2.30	1.30	2.40	2.00
28	1.90	3.00	5.60	16.40	7.70	8.40	2.50	1.50	2.00	1.30	2.30	2.10
29	2.50		5.20	10.20	7.20	5.40	2.00	1.20	1.70	1.70	2.20	2.80
30	2.50		4.50	8.90	3.50	3.10	1.30	0.80	1.50	2.30	2.00	2.60
31	2.20		4.50		3.30		0.60	0.60		2.50		2.60
MEAN	2.003	3.280	5.999	10.575	32.906	30.545	2.630	7.200	15.094	1.610	1.737	2.229
INCHES	0.039	0.058	0.116	0.199	0.639	0.574	0.051	0.140	0.283	0.031	0.033	0.043
STA AV	0.042	0.046	0.093	0.328	0.176	0.146	0.026	0.194	0.186	0.027	0.094	0.049

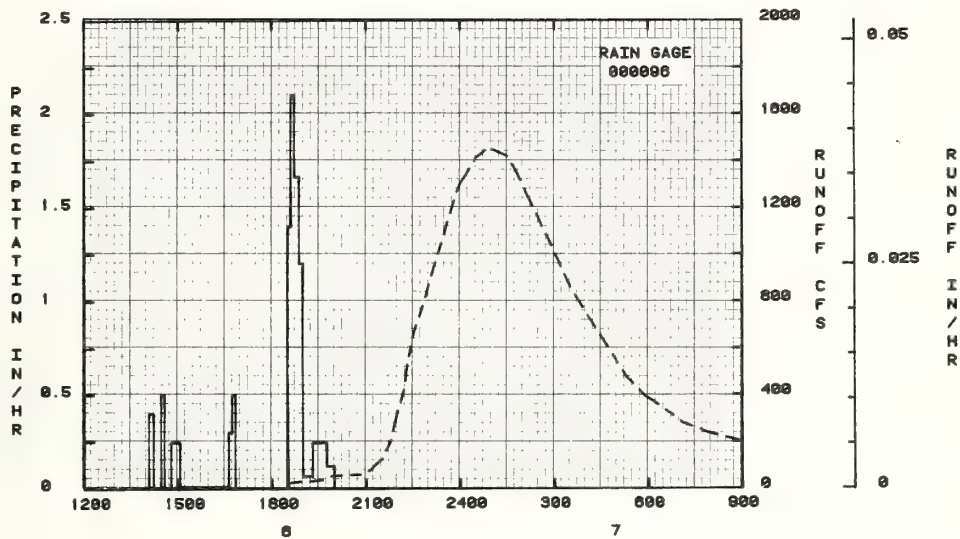
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0006260. To convert discharge in inches to AC-FT, multiply by 3,168. STA AV based on 8 yr (1962-69) record period.

1969	SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 511 NEAR TABLER			
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969										
5- 6	RG 000096		5- 6	RG 000096			5- 6			
	0.0	0.016		1404	0.0	0.0		1836	27.90	0.0
				1413	0.4000	0.06		1936	37.80	0.0009
				1427	0.0	0.06		1954	56.20	0.0013
				1433	0.5000	0.11		2048	61.30	0.0027
				1446	0.0	0.11		2106	77.10	0.0032
WATERSHED CONDITIONS:				1503	0.2471	0.18		2130	128.30	0.0043
From a 1967 survey; sowed				1637	0.0128	0.20		2148	207.60	0.0056
crop - 21%; row crop - 5%;				1643	0.3000	0.23		2154	276.80	0.0062
alfalfa - 3%; pasture and				1649	0.5000	0.28		2200	331.80	0.0070
range - 63%; and miscel-				1831	0.0	0.28		2212	420.50	0.0090
laneous - 8%.				1837	1.4001	0.42		2218	528.90	0.0102
				1843	2.0999	0.63		2230	659.50	0.0133
				1852	1.6667	0.88		2248	780.60	0.0189
				1859	1.2000	1.02		2300	872.00	0.0232
				1917	0.0667	1.04		2312	964.90	0.0280
				1944	0.2444	1.15		2324	1049.60	0.0333
				1959	0.1200	1.18		2336	1139.40	0.0390
								2348	1229.50	0.0452
								2400	1304.30	0.0518
							5- 7	18	1365.40	0.0622
								30	1414.50	0.0695
								48	1445.90	0.0807
								100	1451.10	0.0883
								130	1419.70	0.1070
								148	1352.60	0.1178
								206	1261.70	0.1280
								218	1207.30	0.1344
								236	1120.30	0.1435
								254	1038.00	0.1519
								312	949.20	0.1597
								330	861.20	0.1668
								354	772.30	0.1753
								418	687.10	0.1829
								442	603.70	0.1896
								518	475.30	0.1980

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00002608. For Isohyetal map, see p. 69.009-5 of this publication.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLER								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 6 - 7, 1969 (CONTINUED)											
							5- 7	554	392.40	0.2048	
								618	357.30	0.2087	
								706	278.50	0.2153	
								754	236.80	0.2207	
								906	198.90	0.2275	

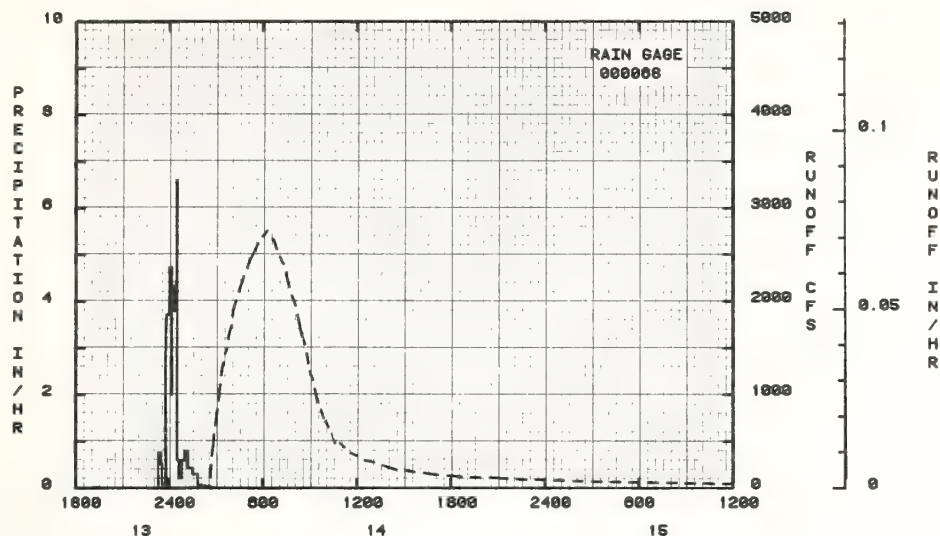
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00002608. For Isohyetal map, see p. 69.009-5 of this publication.



EVENT OF MAY 6 - 7, 1969
CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLER

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLE							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 13 - 15, 1969										
RG 000068			RG 000068							
6-13	0.0		6-13	2320	0.0	0.0	6-14	1	2.70	0.0
6-14		0.0		2327	0.7714	0.09		42	4.30	0.0001
				2334	0.5143	0.15		136	7.00	0.0002
				2350	0.0750	0.17		212	9.10	0.0003
				2400	3.7199	0.79		224	9.90	0.0003
WATERSHED CONDITIONS:										
From a 1967 survey; sowed			6-14	9	4.7333	1.50		236	26.10	0.0004
crop - 21%; row crop - 5%;				12	2.0000	1.60		242	248.70	0.0008
alfalfa - 3%; pasture and				21	4.3333	2.25		248	427.20	0.0017
range - 63%; and miscel-				27	3.8000	2.63		254	573.10	0.0030
laneous - 8%.				31	6.6000	3.07		300	717.20	0.0047
				39	0.6000	3.15		306	844.00	0.0067
				50	0.2182	3.19		312	968.40	0.0091
				100	0.6000	3.29		318	1111.10	0.0118
				112	0.8000	3.45		324	1285.60	0.0149
				130	0.4333	3.58		330	1346.10	0.0183
				150	0.3000	3.68		336	1445.20	0.0219
				219	0.0621	3.71		342	1501.00	0.0257
				247	0.0214	3.72		348	1620.40	0.0298
								400	1743.50	0.0366
								406	1898.40	0.0433
								418	2012.30	0.0535
								430	2120.10	0.0643
								448	2269.40	0.0815
								512	2450.90	0.1061
								542	2622.10	0.1392
								600	2696.50	0.1600
								618	2758.50	0.1813
								642	2654.29	0.2095
								654	2558.20	0.2231
								706	2479.09	0.2362
								718	2401.10	0.2489
								730	2293.70	0.2612
								742	2158.50	0.2728
								754	2041.20	0.2838
								806	1955.00	0.2942
								818	1787.20	0.3040
								830	1625.70	0.3129
								836	1586.30	0.3171
								842	1539.50	0.3212
								854	1333.90	0.3287
								900	1249.90	0.3321
								912	1156.60	0.3384
								924	989.90	0.3440
								930	915.70	0.3465
								942	838.00	0.3511
								954	745.70	0.3552
								1000	717.20	0.3571
								1012	652.50	0.3607
								1024	581.70	0.3639
								1036	481.80	0.3667
								1054	481.80	0.3705
								1112	436.30	0.3741
								1136	376.70	0.3783
								1200	344.10	0.3821
								1230	296.80	0.3863
								1306	273.60	0.3908
								1430	194.60	0.3993
								1712	137.50	0.4110
								1842	119.50	0.4160
								2136	98.90	0.4243
								2400	83.20	0.4300
								524	59.80	0.4401
								1318	42.50	0.4506
6-15										

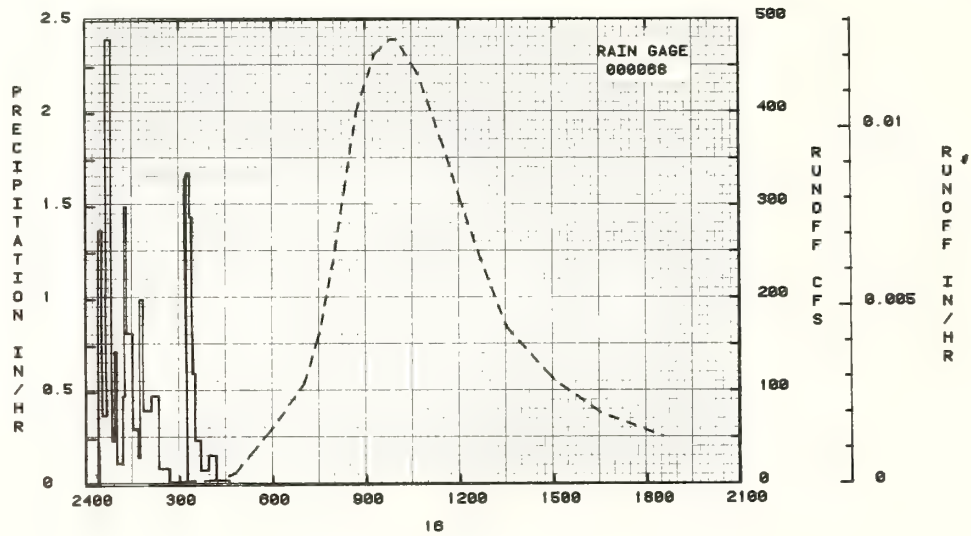
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00002608.



EVENT OF JUNE 13 - 15, 1969
CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLER

1969	SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA				WATERSHED 511 NEAR TABLER		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 16, 1969										
RG 000068			RG 000068							
9-16	0.0	0.0	9-16	25	0.0	0.0	9-16	200	0.30	0.0
				32	1.3714	0.16		230	0.90	0.0
				40	0.3750	0.21		300	3.50	0.0
				50	2.4000	0.61		330	4.80	0.0001
				55	0.2400	0.63		418	5.60	0.0002
WATERSHED CONDITIONS:				100	0.7200	0.69		448	13.40	0.0003
From a 1967 survey; sowed				110	0.1200	0.71		518	34.00	0.0006
crop - 21%; row crop - 5%;				115	0.4800	0.75		600	62.00	0.0015
alfalfa - 3%; pasture and				119	1.5000	0.85		700	108.90	0.0037
range - 63%; and miscel-				130	0.8182	1.00		730	163.30	0.0055
laneous - 8%.				140	0.3000	1.05		800	252.40	0.0082
				144	0.1500	1.06		818	316.70	0.0104
				150	1.0000	1.16		842	400.10	0.0142
				205	0.4000	1.26		918	462.80	0.0209
				220	0.4800	1.38		948	478.60	0.0270
				240	0.0900	1.41		1000	478.60	0.0295
				315	0.0171	1.42		1042	441.00	0.0379
				320	1.6800	1.56		1130	362.40	0.0463
				325	1.4400	1.68		1206	298.10	0.0514
				330	0.6000	1.73		1242	239.00	0.0556
				340	0.2400	1.77		1330	168.50	0.0599
				355	0.0800	1.79		1500	112.00	0.0654
				410	0.1600	1.83		1630	76.30	0.0691
				435	0.0240	1.84		1830	50.70	0.0724

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0002608.



EVENT OF SEPTEMBER 16, 1969
CHICKASHA, OKLAHOMA WATERSHED 511 NEAR TABLER

CHICKASHA, OKLAHOMA WATERSHED 110 NEAR ANADARKO

LOCATION: Tonkawa Creek Watershed above county road East-Northeast of Anadarko, in Caddo County, Okla.; tributary to Washita River: Red River Basin. Gaging Station--NE 1/4 sec. 18, T. 7 N., R. 9 W., Lat. 35 deg. 05 min., long. 98 deg. 11 min., 1-1/2 miles east of Anadarko, Okla., on upstream side of section line road bridge :

AREA: 25020.00 acres 39.10 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED 110 NEAR ANADARKO											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.12	1.89	2.19	3.15	5.14	2.50	0.43	2.89	3.49	1.71	0.20	0.61	24.32			
	Q	0.0	0.0	0.0	0.087	0.369	0.024	0.0	0.000	0.000	0.0	0.0	0.0	0.481			
STA AV	P	0.69	1.10	1.26	2.78	3.75	2.98	1.82	2.57	3.82	1.55	2.08	0.81	25.22			
	Q	0.0	0.002	0.005	0.031	0.078	0.005	0.0	0.001	0.000	0.0	0.003	0.0	0.125			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5- 7	0.003	5- 7	0.003	5- 7	0.006	5- 7	0.019	5- 7	0.036	5- 6	0.070	5- 6	0.127	5- 4	0.278
MAXIMUMS FOR PERIOD OF RECORD																	
		5-11	0.004	5-11	0.004	5-11	0.007	5-11	0.021	5-11	0.038	5- 6	0.070	5- 6	0.127	5- 4	0.278
		1964		1964		1964		1964		1964		1969		1969		1969	

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 27%; row crop - 6%; alfalfa - 10%; pasture and range - 33%; and miscellaneous - 24%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1962, USDA Misc. Pub. 1070, p. 69.10-4 (Topography) and 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 10 gages on the watershed. Precipitation records began Oct. 1961; runoff records began April 1963. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969		DAILY PRECIPITATION (inches)					CHICKASHA, OKLAHOMA				WATERSHED 110 NEAR ANADARKO			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.69	0.0	0.0	0.0	0.0	1.52	0.34	0.0	0.11	0.0		
3	0.0	0.0	0.05	0.0	1.17	0.0	0.0	0.0	0.06	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	1.32	0.0	0.0	0.15	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.12	0.0	0.07	0.0	0.0	0.01	0.0	0.10	0.0	0.19		
6	0.0	0.0	0.0	0.0	1.30	0.0	0.0	0.0	0.0	0.27	0.0	0.01		
7	0.0	0.0	0.04	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.06	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.61	0.0	0.0	0.0	0.04	0.12	0.0	0.0		
12	0.0	0.0	0.0	0.01	0.27	0.0	0.0	0.0	0.0	0.48	0.0	0.0		
13	0.0	0.34	0.0	0.03	0.18	1.85	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.79	0.08	0.0	0.01	0.40	0.0	0.0	0.04	0.0	0.0	0.0		
15	0.01	0.02	0.04	0.0	0.0	0.0	0.0	0.42	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	1.79	0.05	0.0	0.0	0.0	0.90	0.0	0.0	0.0		
17	0.0	0.01	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.04		
21	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	1.42	0.04	0.0	0.0		
22	0.0	0.0	0.31	0.0	0.0	0.0	0.01	0.29	0.63	0.10	0.0	0.0		
23	0.0	0.12	0.86	0.01	0.0	0.0	0.0	0.02	0.0	0.21	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.08	0.04	0.40	0.38	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	1.31	0.0	0.0	0.02	0.0	0.0	0.0	0.09	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.09	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17		
29	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.20		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.12	1.89	2.19	3.15	5.14	2.50	0.43	2.89	3.49	1.71	0.20	0.61		
STA AV	0.69	1.10	1.26	2.78	3.75	2.98	1.82	2.57	3.82	1.55	2.08	0.81		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 10 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 110 NEAR ANADARKO												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	8.601	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	5.401	0.0	0.0	0.397	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	3.601	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	5.107	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	24.623	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	50.581	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	73.367	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	52.683	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	34.183	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	34.527	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	12.252	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	10.400	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	12.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	14.899	0.195	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	10.389	1.265	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.100	7.700	5.731	0.0	0.0	0.352	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	5.701	5.600	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	8.539	4.600	4.400	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	10.187	3.900	3.400	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	7.621	3.200	2.300	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	5.450	2.600	1.400	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	3.600	2.000	0.800	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	2.300	1.500	0.200	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	1.400	1.200	0.100	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.800	0.900	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	1.392	0.700	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	5.152	0.500	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	17.833	0.300	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	15.775	0.100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	11.801	0.013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	3.065	12.504	0.846	0.0	0.013	0.012	0.0	0.0	0.0
INCHES	0.0	0.0	0.0	0.087	0.369	0.024	0.0	0.000	0.000	0.0	0.0	0.0
STA AV	0.0	0.002	0.005	0.031	0.078	0.005	0.0	0.001	0.000	0.0	0.003	0.0

NOTES: To convert mean daily discharge in CPS to IN/DAY, multiply by .0009513. To convert in inches to AC-FT, multiply by 2.085. STA AV based on 7 yr (1963-69) record period.

CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH

LOCATION: Little Washita River Watershed above U.S. highway 81 bridge South of Chickasha in Grady and Caddo Counties, Okla.; tributary to Washita River; Red River Basin. GAGING STATION--SE1/4 sec. 32, T. 6 N., E. 7 W., lat. 34 deg. 57 min., long. 97 deg. 57 min., 5-1/2 miles South of Chickasha, Okla., at U.S. highway 81 bridge.

AREA: 132990.00 acres 207.80 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.99	2.33	2.21	1.97	5.96	3.24	0.47	2.75	4.89	1.70	0.19	1.33	28.03															
	Q	0.085	0.122	0.148	0.181	0.684	0.312	0.028	0.034	0.101	0.039	0.050	0.059	1.845															
STA AV	P	0.96	1.24	1.51	2.73	4.17	2.83	1.91	2.59	3.94	1.82	2.21	0.90	26.79															
	Q	0.073	0.080	0.101	0.152	0.295	0.143	0.036	0.049	0.063	0.041	0.101	0.058	1.194															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		5- 6	0.038	5- 6	0.037	5- 6	0.074	5- 6	0.195	5- 6	0.264	5- 6	0.305	5- 5	0.354	5- 3	0.536												
MAXIMUMS FOR PERIOD OF RECORD																													
		5-10	0.056	5-10	0.055	5-10	0.108	5- 9	0.253	5- 9	0.316	5- 9	0.365	5- 9	0.476	5- 3	0.536												
		1964		1964		1964		1964		1964		1964		1964		1969													

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 12%; row crop - 3%; alfalfa - 3%; pasture and range - 66%; and miscellaneous - 16%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 69.15-4 (Topography) and 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 36 gages on the watershed. Precipitation records began Oct. 1961; runoff records began April 1963. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)						CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.60	0.0	0.0	0.0	0.0	1.25	0.21	0.0	0.05	0.0	
3	0.0	0.0	0.06	0.0	1.16	0.0	0.0	0.0	0.17	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	1.51	0.0	0.0	0.31	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.10	0.0	0.22	0.0	0.0	0.12	0.0	0.08	0.0	0.42	
6	0.0	0.0	0.0	0.0	1.85	0.0	0.0	0.0	0.0	0.33	0.0	0.02	
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.01	0.12	0.0	0.0	0.32	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.01	0.04	0.0	0.0	
12	0.0	0.0	0.0	0.07	0.32	0.0	0.0	0.0	0.0	0.43	0.0	0.0	
13	0.0	0.47	0.0	0.05	0.12	1.78	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.84	0.07	0.0	0.03	1.11	0.0	0.0	0.01	0.0	0.0	0.0	
15	0.01	0.01	0.07	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	1.06	0.34	0.0	0.0	0.0	1.31	0.0	0.0	0.0	
17	0.0	0.03	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.59	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.05	
21	0.01	0.25	0.0	0.0	0.0	0.0	0.0	0.0	2.02	0.02	0.0	0.0	
22	0.0	0.0	0.32	0.0	0.0	0.0	0.03	0.17	0.83	0.14	0.0	0.0	
23	0.0	0.13	0.95	0.0	0.0	0.0	0.0	0.07	0.0	0.26	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.03	0.29	0.35	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.78	0.0	0.0	0.15	0.0	0.0	0.0	0.14	0.0	
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.05	0.0	0.16	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.43	
29	0.93	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.23	0.0	0.32	
30	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.09	
31	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.99	2.33	2.21	1.97	5.96	3.24	0.47	2.75	4.89	1.70	0.19	1.33	
STA AV	0.96	1.24	1.51	2.73	4.17	2.83	1.91	2.59	3.94	1.82	2.21	0.90	

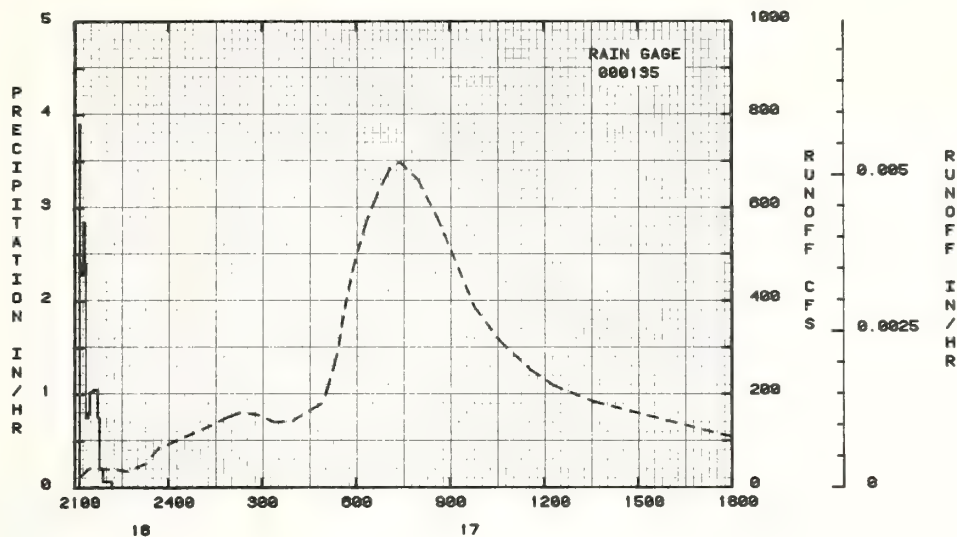
NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 36 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA			WATERSHED 522 NEAR MINNEKAH			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	13.0	23.0	25.3	25.3	13.6	18.7	10.8	3.4	2.2	6.0	9.7	10.2
2	13.0	19.4	28.5	26.9	13.0	18.0	9.7	24.7	2.2	4.5	9.2	9.7
3	12.4	15.4	45.9	26.1	41.7	18.7	9.2	32.4	4.1	3.8	9.7	8.7
4	12.4	13.6	45.9	23.7	127.3	19.4	7.8	7.3	4.8	3.4	9.2	8.7
5	14.8	14.8	35.4	23.0	717.0	18.7	7.3	18.2	2.8	3.4	9.7	9.2
6	14.8	15.4	34.5	22.2	1025.8	17.3	6.4	16.0	1.5	6.4	10.2	13.0
7	13.0	14.2	29.3	23.0	801.7	14.8	5.6	9.2	0.7	10.2	10.2	13.6
8	13.6	12.4	27.7	23.0	113.1	15.4	5.6	7.8	3.4	8.2	9.7	11.3
9	13.0	11.3	23.0	24.5	75.6	18.0	5.6	6.4	4.5	6.0	9.2	11.3
10	10.8	12.4	20.1	24.5	65.8	16.0	6.0	4.1	2.8	4.5	8.7	10.8
11	10.8	14.2	19.4	26.9	62.3	14.2	6.0	2.5	3.1	4.5	8.7	10.2
12	15.4	12.4	18.7	26.1	122.3	13.0	6.0	2.5	4.1	6.4	8.2	10.2
13	13.6	11.9	20.8	26.9	57.7	21.8	4.5	2.0	3.8	13.6	8.2	10.2
14	13.0	39.1	20.1	26.9	42.0	1146.3	3.4	1.3	2.8	7.3	8.2	10.2
15	13.6	45.9	21.5	24.5	29.3	57.7	2.8	1.7	2.5	6.4	8.2	10.8
16	14.2	27.7	23.0	26.6	59.8	42.0	3.1	4.8	56.4	6.0	8.7	10.8
17	13.0	22.2	19.4	227.1	77.2	32.7	2.8	4.5	13.4	6.0	9.2	10.8
18	12.4	20.1	17.3	48.0	42.0	31.8	2.8	2.8	5.6	6.4	8.7	10.8
19	12.4	20.1	16.0	27.7	37.2	26.9	2.8	2.2	4.1	6.0	8.7	11.3
20	14.8	48.0	15.4	22.2	31.0	23.7	3.1	1.1	3.1	6.0	8.2	11.3
21	13.0	48.0	15.4	21.5	29.3	22.2	2.8	0.7	10.8	5.6	8.7	11.3
22	11.3	42.9	16.7	17.3	25.3	20.8	2.8	0.4	233.6	5.6	9.2	11.3
23	10.8	31.0	64.7	17.3	24.5	18.0	3.1	1.7	109.9	8.7	9.2	11.3
24	8.7	31.8	43.9	20.1	23.0	16.7	3.1	2.5	19.4	11.3	9.7	11.9
25	10.8	29.3	29.3	18.7	23.7	15.4	3.1	3.4	14.8	8.2	9.7	11.9
26	9.7	30.1	27.7	33.6	24.5	17.3	4.8	5.2	11.3	7.8	10.2	11.3
27	9.7	26.9	26.1	95.4	24.5	15.4	8.7	5.6	10.8	7.3	12.4	10.8
28	10.8	26.1	24.5	26.1	24.5	13.0	6.0	4.8	9.2	8.7	12.4	11.3
29	63.2		24.5	20.1	24.5	10.8	4.8	4.5	7.8	10.2	10.2	9.7
30	40.0		24.5	16.7	22.2	10.8	4.5	3.4	6.4	11.3	9.2	8.7
31	23.0		24.5		20.8		3.8	2.5		10.2		8.7
MEAN	15.32	24.27	26.74	33.73	123.30	58.18	5.12	6.12	18.73	7.09	9.38	10.69
INCHES	0.085	0.122	0.148	0.181	0.684	0.312	0.028	0.034	0.101	0.039	0.050	0.059
STA AV	0.073	0.080	0.101	0.152	0.295	0.143	0.036	0.049	0.063	0.041	0.101	0.058

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0001790. To convert discharge in inches to AC-FT, multiply by 11,082. Yearly mean discharge, 21.2 CFS. STA AV based on 7 yr (1963-69) record period.

1969	SELECTED RUNOFF EVENT				CHICKASHA, OKLAHOMA			WATERSHED 522 NEAR MINNEKAH			
ANTECEDENT CONDITIONS		RAINFALL		RUNOFF							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF APRIL 16 - 17, 1969											
RG 000135											
4-16	0.0	0.004	4-16	2110	0.0	0.0	4-16	2112	25.00	0.0	
				2112	3.8992	0.13		2130	43.20	0.0001	
				2117	2.2801	0.32		2242	36.30	0.0005	
				2121	2.8500	0.51		2318	52.90	0.0007	
				2123	2.3995	0.59		2342	87.20	0.0009	
WATERSHED CONDITIONS:											
From a 1967 survey; sowed											
crop - 12%; row crop - 3%;											
alfalfa - 3%; pasture and											
range - 66%; and miscel-											
laneous - 16%.											
				2127	0.7500	0.64		2400	93.60	0.0011	
				2130	0.8000	0.68	4-17	106	125.80	0.0020	
				2137	1.0287	0.80		154	151.00	0.0028	
				2145	1.0499	0.94		218	160.80	0.0033	
				2149	0.7500	0.99		254	155.60	0.0040	
				2155	0.2000	1.01		324	139.80	0.0046	
				2212	0.0706	1.03		400	144.40	0.0052	
								454	180.80	0.0063	
								506	212.80	0.0066	
								524	287.10	0.0072	
								536	366.90	0.0077	
								554	468.80	0.0086	
								618	563.10	0.0101	
								642	632.90	0.0119	
								706	685.40	0.0139	
								724	698.90	0.0154	
								800	659.60	0.0184	
								836	580.50	0.0212	
								948	385.70	0.0255	
								1036	313.30	0.0276	
								1136	251.00	0.0297	
								1218	218.40	0.0309	
								1336	183.00	0.0328	
								1800	107.90	0.0376	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00007457.



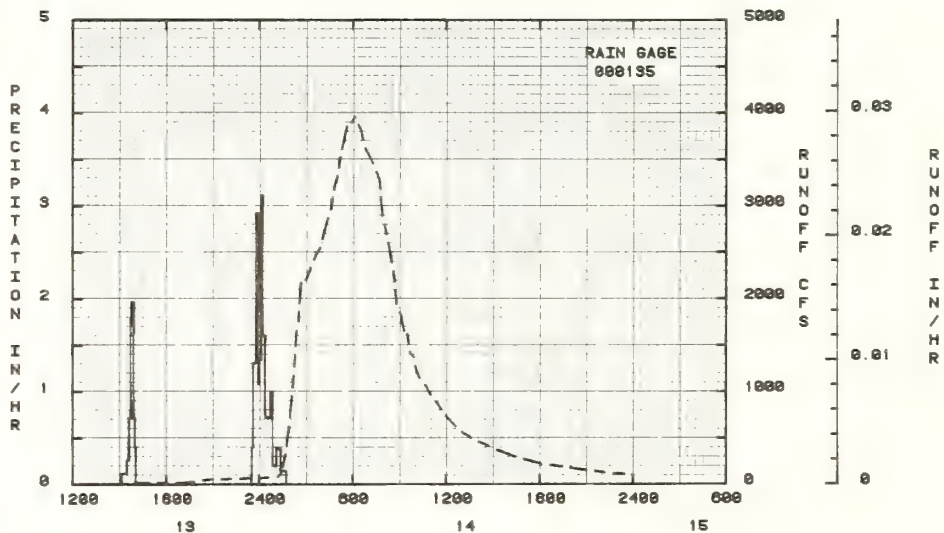
EVENT OF APRIL 16 - 17, 1969
CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF JUNE 13 - 14, 1969									
6-13	RG 000135 0.0	0.002	6-13	1510	0.0	0.0	6-13	1606	20.10
				1530	0.1200	0.04		1654	16.70
				1539	0.2667	0.08		1900	20.20
				1544	0.7200	0.14		1948	31.90
				1548	1.8000	0.26		2024	47.30
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 12%; row crop - 3%; alfalfa - 3%; pasture and range - 66%; and miscel- laneous - 16%.				1555	1.9714	0.49		2100	58.20
				1600	0.7200	0.55		2400	70.10
				1603	0.4001	0.57	6-14	112	85.80
				2330	0.0	0.57		124	120.50
				2336	0.4000	0.61		130	189.00
				2347	1.3091	0.85		142	323.90
				2355	2.9250	1.24		148	482.30
				2400	1.0799	1.33		154	626.20
			6-14	8	1.3500	1.51		200	800.20
				13	3.1200	1.77		206	949.40
				22	1.6000	2.01		212	1173.00
				42	0.7200	2.25		218	1394.30
				51	1.0000	2.40		224	1659.20
				106	0.2000	2.45		230	1758.20
				123	0.3882	2.56		236	2018.70
				144	0.1429	2.61		242	2175.20
								300	2208.40
								318	2336.40
								330	2428.10
								354	2551.80
								406	2692.60
								424	2875.60
								436	2983.30
								448	3204.30
								500	3323.50
								512	3526.00
								524	3695.70
								536	3857.80
								554	3902.00
								606	3960.70

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000007457.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JUNE 13 - 14, 1969 (CONTINUED)											
6-14							630		3817.50	0.1002	
							648		3617.10	0.1085	
							718		3459.40	0.1217	
							742		3283.90	0.1318	
							754		2892.70	0.1364	
							818		2578.10	0.1446	
							830		2391.50	0.1483	
							842		2185.40	0.1517	
							848		1944.40	0.1532	
							906		1823.40	0.1574	
							918		1652.90	0.1600	
							930		1620.20	0.1624	
							942		1418.50	0.1647	
							954		1371.40	0.1668	
							1006		1221.50	0.1687	
							1018		1145.80	0.1705	
							1042		1063.60	0.1738	
							1100		964.50	0.1761	
							1124		881.60	0.1789	
							1142		805.90	0.1808	
							1200		738.50	0.1825	
							1236		623.80	0.1855	
							1306		551.20	0.1877	
							1336		500.30	0.1897	
							1412		451.30	0.1918	
							1518		364.60	0.1951	
							1624		297.00	0.1978	
							1730		246.20	0.2000	
							1806		215.70	0.2010	
							1924		187.30	0.2030	
							2100		148.10	0.2050	
							2248		114.70	0.2068	
							2400		99.70	0.2078	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000007457.



EVENT OF JUNE 13 - 14, 1969
CHICKASHA, OKLAHOMA WATERSHED 522 NEAR MINNEKAH

CHICKASHA, OKLAHOMA WATERSHED 512 AT TABLER

LOCATION: East Bitter Creek Watershed above U.S. Highway 62 bridge at Tabler, in Grady County, Okla.; tributary to Washita River; Red River Basin. GAGING STATION--SW1/4 sec. 27, T. 7 N., R. 6 W., lat. 35 deg. 05 min., long. 97 deg. 50 min., at Tabler, Okla., at U.S. highway 62 bridge.

AREA: 22530.00 acres 35.20 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA				WATERSHED 512 AT TABLER							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.77	2.49	2.13	1.37	4.87	3.99	3.41	2.75	3.93	1.44	0.34	1.53	29.02			
	Q	0.078	0.150	0.220	0.192	0.958	0.745	0.289	0.045	0.119	0.068	0.074	0.091	3.028			
STA AV	P	0.95	1.30	1.69	2.92	3.53	3.37	2.33	3.56	3.80	1.59	2.26	1.02	28.32			
	Q	0.093	0.104	0.158	0.338	0.350	0.203	0.093	0.217	0.143	0.059	0.170	0.082	2.011			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge Date Rate				Maximum Volume for Selected Time Interval											
				1 Hour Date Vol.		2 Hours Date Vol.		6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.		8 Days Date Vol.	
1969		6-14	0.095	6-14	0.094	6-14	0.188	6-14	0.412	6-14	0.488	6-14	0.529	6-14	0.561	5- 3	0.698
MAXIMUMS FOR PERIOD OF RECORD																	
		8- 8	0.134	8- 8	0.129	8- 8	0.244	8- 7	0.472	8- 7	0.523	8- 7	0.543	4-12	0.610	4- 9	0.742
		1965		1965		1965		1965		1965		1965		1967		1967	

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 5%; row crop - 1%; alfalfa - 4%; pasture and range - 84%; and miscellaneous - 6%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.16-8 (Topography and p. 69.7-21 (Composite)). Precipitation data obtained from a Thiessen weighted average of 31 gages on the watershed. Precipitation records began Oct. 1961; runoff records began Aug. 1963. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED 512 AT TABLER	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.47	0.0	0.0	0.0	0.0	0.48	0.49	0.0	0.02	0.0		
3	0.0	0.0	0.04	0.0	1.46	0.0	0.0	0.0	0.06	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.06	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.14	0.0	0.34	0.0	0.0	0.0	0.0	0.15	0.0	0.0		0.75
6	0.0	0.0	0.0	0.0	1.76	0.0	0.0	0.0	0.0	0.23	0.0	0.02		
7	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.16	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.04	0.48	0.05	0.0	0.0	0.0	0.43	0.0	0.0		
13	0.0	0.51	0.0	0.08	0.01	1.45	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.07	0.06	0.0	0.01	1.94	0.0	0.0	0.09	0.0	0.0	0.0		
15	0.01	0.02	0.02	0.0	0.0	0.0	0.0	0.42	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.44	0.32	0.0	0.0	0.0	1.52	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.59	0.0	0.0	0.0	0.0	2.65	0.0	0.0	0.01	0.0	0.08		
21	0.0	0.24	0.0	0.0	0.0	0.0	0.04	0.0	0.78	0.03	0.0	0.0		
22	0.0	0.0	0.33	0.0	0.0	0.0	0.09	0.69	0.83	0.05	0.0	0.0		
23	0.0	0.05	1.04	0.16	0.0	0.0	0.0	0.09	0.0	0.19	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.96	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.65	0.0	0.0	0.01	0.0	0.0	0.0	0.32	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.07	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.39		
29	0.68	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.26		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03		
31	0.07	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.77	2.49	2.13	1.37	4.87	3.99	3.41	2.75	3.93	1.44	0.34	1.53		
STA AV	0.95	1.30	1.69	2.92	3.53	3.37	2.33	3.56	3.80	1.59	2.26	1.02		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 31 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA				WATERSHED 512 AT TABLER		
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.00	2.60	4.20	6.20	4.30	9.40	2.30	1.50	0.70	1.30	2.80	2.70
2	2.30	2.50	5.00	6.20	4.20	6.40	2.30	2.10	1.30	1.20	2.60	2.70
3	2.30	2.30	7.90	6.20	62.48	5.70	2.00	2.40	2.00	1.20	2.40	2.60
4	2.00	2.20	6.40	5.80	47.09	6.00	1.70	1.60	1.60	1.10	2.20	2.60
5	2.40	2.30	5.70	5.70	40.33	6.00	1.60	1.60	1.00	1.30	2.20	3.10
6	2.50	2.40	6.20	5.20	270.80	5.30	1.40	2.00	0.70	2.00	2.20	5.00
7	2.50	2.30	5.70	5.30	161.96	4.60	1.20	1.30	0.70	2.30	2.20	3.40
8	2.50	2.10	5.30	5.30	32.60	4.30	1.00	1.00	0.70	2.00	2.20	2.90
9	2.20	2.00	4.60	5.50	21.60	4.20	1.00	0.80	0.60	1.70	2.10	2.90
10	2.20	2.10	4.40	5.30	17.60	4.40	0.90	0.60	0.60	1.60	2.10	2.90
11	2.20	2.20	4.40	5.20	15.60	4.20	0.70	0.50	0.80	1.60	2.20	2.70
12	2.20	2.20	4.60	5.30	29.70	3.90	0.70	0.40	1.00	2.30	2.20	2.60
13	2.20	2.40	4.60	6.20	16.01	4.70	0.60	0.30	0.80	2.80	2.20	2.70
14	2.20	12.00	4.60	5.70	13.80	501.33	0.50	0.30	0.50	2.30	2.00	2.70
15	2.30	16.92	4.90	5.00	12.70	31.02	0.50	0.50	0.60	2.20	2.00	2.60
16	2.40	5.80	4.90	5.30	12.70	16.90	0.40	0.90	34.79	2.00	2.10	2.60
17	2.40	4.60	4.40	7.90	16.30	12.40	0.30	0.50	3.92	2.00	2.20	2.60
18	2.30	4.00	4.60	5.20	13.00	14.40	0.30	0.40	1.80	2.00	2.20	2.60
19	2.20	3.80	4.40	4.70	11.60	8.70	0.30	0.30	1.50	2.00	2.20	2.60
20	2.30	11.45	4.00	4.60	10.80	7.30	0.30	0.30	1.30	2.00	2.20	2.60
21	2.30	11.32	3.90	4.60	9.90	6.50	214.41	0.20	2.89	2.00	2.20	2.60
22	2.40	10.32	4.30	4.60	9.00	6.00	10.80	0.20	6.15	2.00	2.20	2.60
23	2.20	6.40	35.84	4.60	9.40	5.30	5.30	4.34	30.37	2.30	2.30	2.60
24	2.00	5.80	16.72	5.00	9.40	4.90	3.10	1.60	4.70	2.70	2.40	2.70
25	2.00	5.50	8.70	4.60	9.00	4.30	2.90	5.14	2.80	2.50	2.40	2.60
26	2.20	5.00	6.90	11.00	8.30	4.40	6.50	5.02	2.30	2.40	2.50	2.60
27	2.40	4.70	6.90	19.71	7.70	3.90	3.10	1.80	1.90	2.30	3.30	2.50
28	2.30	4.30	7.10	5.70	7.70	3.50	2.10	1.50	1.70	2.40	2.90	2.60
29	4.00		6.00	5.00	7.30	3.10	1.80	1.30	1.70	2.70	2.80	2.70
30	3.60		5.70	4.70	7.30	2.50	1.60	1.00	1.50	3.30	2.70	2.70
31	2.70		5.80		6.40		1.50	0.80		3.00		2.50
MEAN	2.377	5.054	6.731	6.043	29.244	23.518	8.810	1.361	3.764	2.081	2.340	2.768
INCHES	0.078	0.150	0.220	0.192	0.958	0.745	0.289	0.045	0.119	0.068	0.074	0.091
STA AV	0.093	0.104	0.158	0.338	0.350	0.203	0.093	0.217	0.143	0.059	0.170	0.082

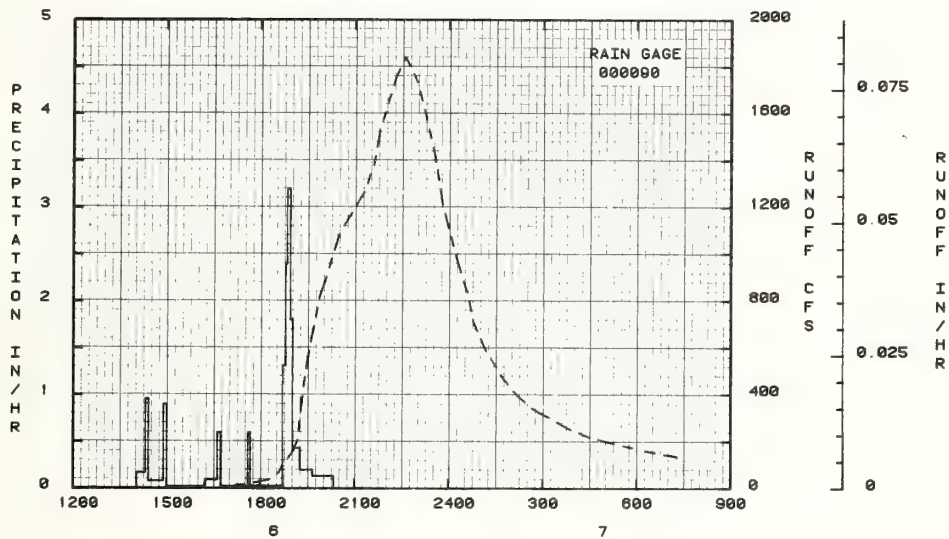
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.001056. To convert discharge in inches to AC-FT, multiply by 1,877. STA AV based on 7 yr (1963-69) record period.

1969	SELECTED RUNOFF EVENT					CHICKASHA, OKLAHOMA				WATERSHED 512 AT TABLER		
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF MAY 6 - 7, 1969												
RG 000090			RG 000090									
5- 6	0.0	0.012	5- 6	1403	0.0	0.0	5- 6	1712	15.00	0.0		
				1420	0.1765	0.05		1730	18.00	0.0002		
				1425	0.9600	0.13		1800	32.20	0.0006		
				1454	0.0828	0.17		1818	39.60	0.0013		
				1500	0.9000	0.26		1836	69.70	0.0020		
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 5%; row crop - 1%; alfalfa - 4%; pasture and range - 84%; and miscel- laneous - 6%.				1613	0.0247	0.29		1842	97.60	0.0024		
				1638	0.0960	0.33		1900	150.60	0.0040		
				1644	0.6001	0.39		1912	209.00	0.0056		
				1736	0.0231	0.41		1918	355.40	0.0068		
				1741	0.6000	0.46		1930	547.60	0.0108		
				1843	0.0290	0.49		1942	694.50	0.0163		
				1848	1.3201	0.60		1954	829.00	0.0230		
				1851	2.3999	0.72		2006	903.70	0.0306		
				1854	3.1998	0.88		2030	1086.50	0.0481		
				1857	3.1998	1.04		2054	1176.80	0.0680		
				1902	1.8001	1.19		2118	1266.80	0.0895		
				1916	0.4286	1.29		2136	1380.20	0.1070		
				1940	0.2000	1.37		2148	1530.20	0.1198		
				2020	0.1350	1.46		2218	1756.00	0.1560		
								2236	1841.20	0.1798		
								2300	1733.70	0.2113		
								2318	1571.80	0.2331		
								2336	1394.80	0.2527		
								2348	1212.30	0.2642		
								2400	1111.90	0.2744		
							5- 7	18	961.10	0.2881		
								36	836.70	0.3000		
								48	708.30	0.3068		
								112	586.90	0.3182		
								142	476.80	0.3299		
								212	395.00	0.3395		
								242	337.60	0.3476		
								312	301.80	0.3546		
								354	250.00	0.3631		
								430	218.90	0.3693		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0000402. For Isohyetal map, see p. 69.9-5 of this publication.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 512 AT TABLER								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 6 - 7, 1969 (CONTINUED)											
							5- 7	500	201.10	0.3739	
								600	166.90	0.3820	
								718	134.20	0.3906	

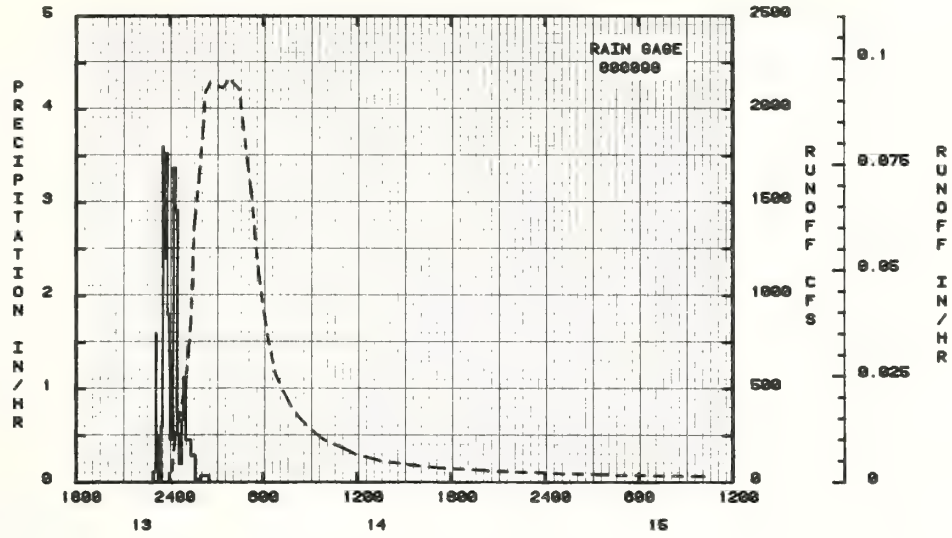
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00004402. For Isohyetal map, see p. 69.9-5 of this publication.



EVENT OF MAY 6 - 7, 1969
CHICKASHA, OKLAHOMA WATERSHED 512 AT TABLER

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 512 AT TABLER							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JUNE 13 - 15, 1969										
RG 000090			RG 000090							
6-13	0.0		6-13	2258	0.0	0.0	6-14	1	9.40	0.0
6-14		0.0		2308	0.1200	0.02		6	14.70	0.0
				2311	1.6004	0.10		12	72.10	0.0002
				2317	0.5000	0.15		18	188.70	0.0008
				2329	0.0	0.15		24	268.50	0.0018
				2333	0.6000	0.19		30	297.80	0.0030
				2338	3.5996	0.49		42	376.00	0.0060
				2344	2.4002	0.73		54	466.00	0.0097
				2353	3.5331	1.26		106	571.60	0.0143
				2400	1.8000	1.47		118	765.40	0.0202
			6-14	3	1.4000	1.54		124	888.80	0.0238
				16	0.4615	1.64		130	1154.90	0.0283
				24	3.3750	2.09		136	1384.70	0.0339
				31	2.9143	2.43		142	1459.00	0.0402
				38	0.5143	2.49		154	1646.20	0.0539
				47	0.2000	2.52		212	1940.80	0.0776
				55	0.6750	2.61		218	2092.90	0.0865
				103	1.1250	2.76		236	2143.10	0.1145
				124	0.4571	2.92		324	2117.90	0.1895
				141	0.2824	3.00		342	2149.40	0.2177
				201	0.0300	3.01		400	2149.40	0.2461
				233	0.0750	3.05		430	2105.40	0.2929
								442	1940.80	0.3107
								500	1717.10	0.3349
								518	1519.90	0.3563
								530	1304.00	0.3687
								548	1065.70	0.3843
								606	891.90	0.3972
								624	740.10	0.4080
								648	580.80	0.4196
								718	487.70	0.4314
								748	409.60	0.4413
								818	348.60	0.4496
								918	266.60	0.4631
								1000	222.20	0.4706
								1100	187.20	0.4796
								1154	150.60	0.4863
								1330	115.50	0.4957
								1524	92.70	0.5044
								1736	74.60	0.5125
								2024	61.90	0.5209
								2400	48.70	0.5297
							6-15	400	38.50	0.5374
								1012	31.20	0.5469

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.0004402.



EVENT OF JUNE 13 - 15, 1969
CHICKASHA, OKLAHOMA WATERSHED 512 AT TABLEE

CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLE

LOCATION: Winter Creek Watershed above county farm to market road bridge North of Alex in Grady County, Okla., tributary to Washita River; Red River Basin. GAGING STATION--NE1/4 sec. 18, T. 6 N., R. 5 W., lat. 35 deg. 00 min., long. 97 deg. 46 min., 5 miles North and 1 mile East of Alex, Okla., about 1,000 feet downstream from County section line farm to market road bridge over Winter Creek.

AREA: 21310.00 acres 33.30 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLE											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	1.55	2.45	2.10	1.66	5.26	3.19	3.77	2.76	4.12	1.47	0.29	1.79	30.41			
	Q	0.187	0.285	0.327	0.256	1.191	0.504	0.329	0.118	0.167	0.107	0.103	0.129	3.702			
STA AV	P	1.22	1.30	1.56	2.92	4.14	3.07	2.31	3.10	3.99	1.55	2.20	1.02	28.36			
	Q	0.135	0.148	0.170	0.273	0.557	0.206	0.148	0.148	0.185	0.077	0.196	0.110	2.353			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge Date		1 Hour Date Vol.		2 Hours Date Vol.		Maximum Volume for Selected Time Interval 6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.		8 Days Date Vol.	
1969		5- 6	0.095	5- 6	0.085	5- 6	0.147	5- 6	0.263	5- 6	0.325	5- 6	0.416	5- 6	0.535	5- 6	0.843
MAXIMUMS FOR PERIOD OF RECORD																	
		5-10	0.207	5-10	0.179	5-10	0.269	5-10	0.337	5-10	0.350	5- 9	0.618	5- 9	0.672	5- 6	0.843
1964		1964		1964		1964		1964		1964		1964		1964		1969	

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 5%; row crop - 1%; alfalfa - 2%; pasture and range - 82%; and miscellaneous - 10%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.17-8 (Topography) and p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 9 gages on the watershed. Precipitation records began Oct. 1961; runoff records began Oct. 1963. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969	DAILY PRECIPITATION (inches)												CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLE	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.46	0.33	0.0	0.01	0.0		
3	0.0	0.0	0.04	0.0	0.91	0.0	0.0	0.0	0.04	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.08	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.14	0.0	0.32	0.0	0.0	0.0	0.0	0.02	0.0	0.87		
6	0.0	0.0	0.0	0.0	2.28	0.0	0.0	0.0	0.0	0.21	0.0	0.02		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.16	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.04	0.51	0.08	0.0	0.0	0.0	0.51	0.0	0.0		
13	0.0	0.43	0.0	0.16	0.0	0.81	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.04	0.08	0.0	0.01	1.80	0.0	0.0	0.09	0.0	0.0	0.0		
15	0.01	0.01	0.02	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.43	0.75	0.0	0.0	0.0	1.68	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.63	0.0	0.0	0.0	0.0	2.43	0.0	0.0	0.0	0.0	0.08		
21	0.0	0.25	0.0	0.0	0.0	0.0	0.39	0.0	1.10	0.01	0.0	0.0		
22	0.0	0.0	0.30	0.0	0.0	0.0	0.31	0.81	0.72	0.07	0.0	0.0		
23	0.0	0.07	1.07	0.16	0.0	0.0	0.0	0.10	0.0	0.17	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.90	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.87	0.0	0.0	0.03	0.0	0.0	0.0	0.28	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.10	0.0	0.0		
28	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.41		
29	1.39		0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.27	0.0	0.31		
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10		
31	0.09		0.0		0.0		0.08	0.0		0.0		0.0		
TOTAL	1.55	2.45	2.10	1.66	5.26	3.19	3.77	2.76	4.12	1.47	0.29	1.79		
STA AV	1.22	1.30	1.56	2.92	4.14	3.07	2.31	3.10	3.99	1.55	2.20	1.02		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 9 rain gages on the watershed. STA AV based on 9 yr (1961-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	4.10	10.30	7.60	8.10	5.60	7.00	2.40	3.10	2.40	2.10	3.90	3.00
2	5.20	7.90	10.00	8.40	5.20	6.20	2.10	5.60	2.10	2.00	3.50	2.80
3	3.90	6.20	10.60	8.90	11.90	5.90	1.70	4.30	2.20	1.70	3.30	3.00
4	3.10	5.90	8.60	8.60	15.54	5.60	1.40	4.10	1.80	1.70	3.30	3.10
5	4.90	5.60	8.90	8.40	22.97	5.90	1.50	3.50	1.50	2.10	3.10	5.44
6	4.70	5.40	9.20	8.10	256.50	5.60	1.40	2.60	1.60	2.80	2.80	8.22
7	4.50	4.90	8.90	7.00	173.17	4.30	1.40	2.20	1.50	3.00	2.80	5.20
8	4.50	4.90	8.90	5.90	94.21	4.50	1.30	1.70	1.40	2.80	2.80	4.10
9	3.90	4.50	8.10	6.20	67.01	4.90	1.00	1.30	1.30	2.60	3.00	4.10
10	3.70	4.30	7.60	5.60	53.01	5.20	0.90	1.10	0.90	2.50	3.00	4.10
11	3.50	4.30	7.30	5.60	42.20	3.90	0.90	1.20	1.70	2.60	3.10	4.10
12	3.90	4.50	7.30	5.90	42.80	3.00	0.70	1.20	1.20	4.50	3.10	3.90
13	3.90	5.40	7.60	7.00	28.40	4.67	0.60	1.30	1.00	3.50	3.10	3.70
14	3.70	18.40	7.30	7.60	21.50	167.29	0.60	5.36	1.10	3.00	3.10	3.70
15	3.90	17.06	8.40	7.60	20.20	54.50	0.60	7.00	1.00	3.10	3.10	3.50
16	4.30	11.60	7.30	6.70	25.35	38.31	0.50	6.20	26.00	3.00	3.00	3.50
17	4.70	9.80	7.60	8.40	31.77	27.90	0.50	4.10	6.40	3.00	2.80	3.50
18	4.50	8.40	7.60	6.70	19.70	23.80	1.00	2.20	4.90	3.00	2.80	3.50
19	4.50	8.40	7.00	5.90	14.60	15.30	1.00	1.50	3.90	2.80	2.60	3.70
20	4.30	17.08	7.00	5.60	13.90	11.20	1.60	1.50	3.30	3.00	2.60	3.70
21	4.10	15.71	6.20	5.40	12.90	9.20	132.48	1.40	14.60	3.00	2.50	3.90
22	4.10	13.20	7.00	5.40	11.60	7.30	41.13	1.06	18.37	3.10	2.50	3.70
23	3.90	12.50	26.88	6.20	11.20	5.90	27.66	6.82	16.39	4.30	2.60	3.70
24	3.10	11.90	18.90	6.20	8.40	4.90	16.90	2.60	8.90	4.10	3.00	3.70
25	3.10	11.20	12.50	5.60	8.60	3.90	12.90	5.14	5.90	3.30	3.00	3.50
26	3.10	10.00	11.60	14.96	9.50	3.50	11.60	4.90	4.90	3.10	3.30	3.30
27	3.30	8.60	10.60	17.72	8.40	3.70	8.40	6.40	3.90	3.10	4.50	3.70
28	3.30	7.60	10.00	10.90	8.10	3.50	5.40	5.60	3.50	3.10	3.50	3.30
29	30.07		9.20	8.10	7.30	2.60	6.20	4.50	3.00	4.30	3.10	2.40
30	13.90		8.40	6.40	7.90	2.10	4.90	3.30	2.50	4.70	3.10	2.20
31	11.90		8.40		6.70		4.30	2.60		4.50		2.00
MEAN	5.405	9.127	9.435	7.636	34.391	15.052	9.515	3.400	4.972	3.077	3.063	3.718
INCHES	0.187	0.285	0.327	0.256	1.191	0.504	0.329	0.118	0.167	0.107	0.103	0.129
STA AV	0.135	0.148	0.170	0.273	0.557	0.206	0.148	0.148	0.185	0.077	0.196	0.110

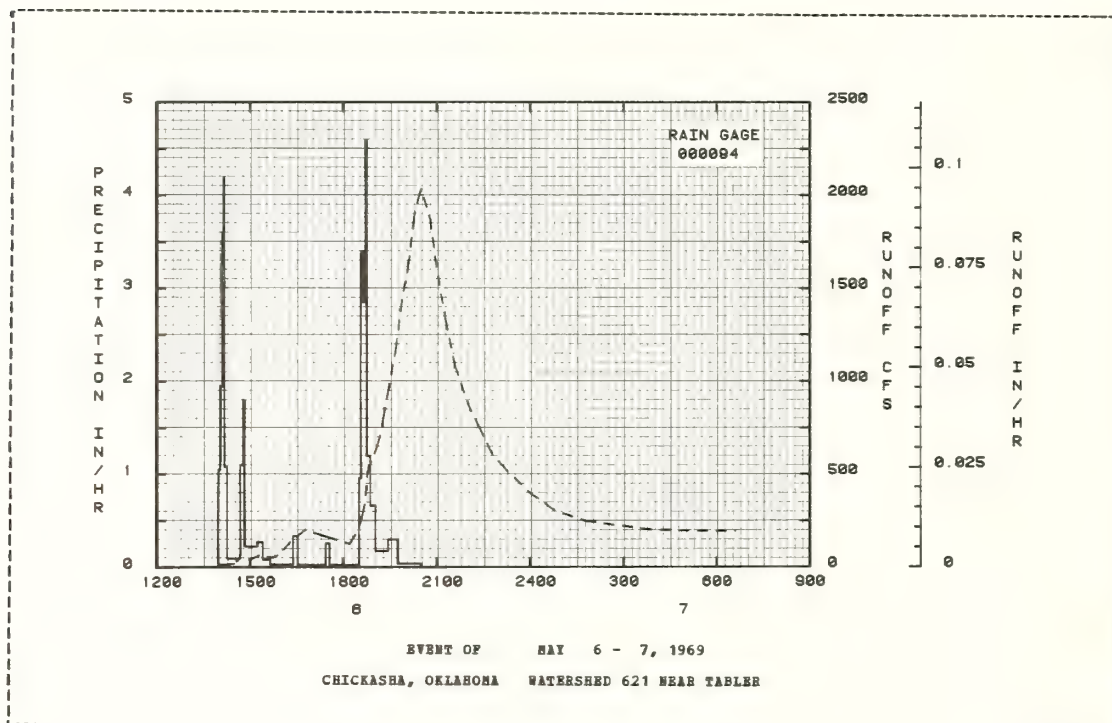
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.001117. To convert discharge in inches to AC-FT, multiply by 1,776. STA AV based on 7 yr (1963-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969										
RG 000094			RG 000094							
5- 6	0.0	0.010	5- 6	1400	0.0	0.0	5- 6	1400	14.60	0.0
				1404	1.0500	0.07		1430	18.90	0.0004
				1408	1.9500	0.20		1436	34.60	0.0005
				1410	3.6001	0.32		1442	50.70	0.0007
				1412	4.1999	0.46		1500	42.20	0.0013
WATERSHED CONDITIONS:										
From a 1967 survey; sowed				1417	1.0800	0.55	1518	64.40	0.0020	
crop - 5%; row crop - 1%;				1442	0.0960	0.59	1542	51.50	0.0031	
alfalfa - 2%; pasture and				1448	1.1000	0.70	1554	63.50	0.0036	
range - 82%; and miscel-				1451	1.8000	0.79	1606	97.50	0.0043	
laneous - 10%.				1515	0.2250	0.88	1618	136.20	0.0054	
			1526	0.2727	0.93		1648	203.40	0.0094	
			1540	0.0857	0.95		1718	172.30	0.0138	
			1624	0.0273	0.97		1748	146.50	0.0175	
			1633	0.3333	1.02		1812	125.20	0.0200	
			1727	0.0222	1.04		1824	174.40	0.0214	
			1734	0.2571	1.07		1836	254.20	0.0234	
			1831	0.0211	1.09		1842	338.80	0.0248	
			1836	0.9601	1.17		1848	521.10	0.0268	
			1839	3.3998	1.34		1906	651.30	0.0350	
			1843	2.8500	1.53		1912	710.20	0.0382	
			1846	4.5997	1.76		1918	808.10	0.0417	
			1853	1.2000	1.90		1930	988.90	0.0501	
			1903	0.6600	2.01		1942	1179.90	0.0602	
			1927	0.1750	2.08		1954	1438.70	0.0724	
			1945	0.3000	2.17		2006	1624.80	0.0867	
			2030	0.0400	2.20		2018	1912.00	0.1032	
							2030	2033.70	0.1216	
							2048	1869.00	0.1488	
							2100	1615.10	0.1650	
							2118	1325.90	0.1855	
							2136	1081.50	0.2023	
							2200	882.50	0.2206	
							2230	710.20	0.2391	
							2248	605.70	0.2483	
							2318	512.20	0.2613	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00004654. For Isohyetal map, see p. 69.9-5 of this publication.

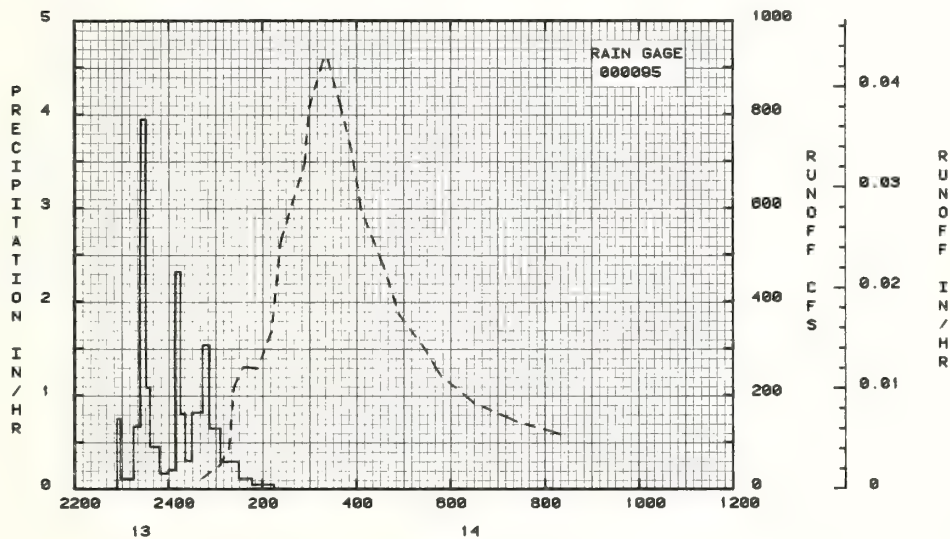
1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969 (CONTINUED)										
							5- 6	2400	398.60	0.2761
							5- 7	48	303.60	0.2892
								148	246.10	0.3020
								354	198.80	0.3237
								542	191.90	0.3401
								636	191.90	0.3481

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00004654. For Isohyetal map, see p. 69.9-5 of this publication.



1969	SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 13 - 14, 1969										
EG 000095			EG 000095							
6-13	0.0		6-13	2255	0.0	0.0	6-14	42	21.10	0.0
6-14		0.001		2259	0.7500	0.05		54	36.40	0.0003
				2316	0.1059	0.08		106	50.00	0.0007
				2325	0.6667	0.18		118	86.90	0.0013
				2332	3.9428	0.64		124	217.80	0.0020
WATERSHED CONDITIONS:				2337	1.0801	0.73		136	259.70	0.0042
From a 1967 survey; sowed				2349	0.4500	0.82		154	256.90	0.0078
crop - 5%; row crop - 1%;				2400	0.1636	0.85		212	335.50	0.0119
alfalfa - 2%; pasture and			6-14	9	0.2000	0.88		224	530.10	0.0159
range - 82%; and miscel-				16	2.3143	1.15		254	693.80	0.0301
laneous - 10%.				22	0.8000	1.23		300	814.10	0.0336
				30	0.3000	1.27		318	914.90	0.0457
				44	0.8143	1.46		324	914.90	0.0500
				53	1.5333	1.69		342	802.10	0.0620
				107	0.6429	1.84		354	721.20	0.0691
				130	0.2870	1.95		406	595.90	0.0752
				147	0.1059	1.98		436	469.40	0.0876
				215	0.0429	2.00		454	373.20	0.0935
								524	306.70	0.1014
								548	240.80	0.1065
								630	183.00	0.1134
								724	142.80	0.1202
								818	117.10	0.1256

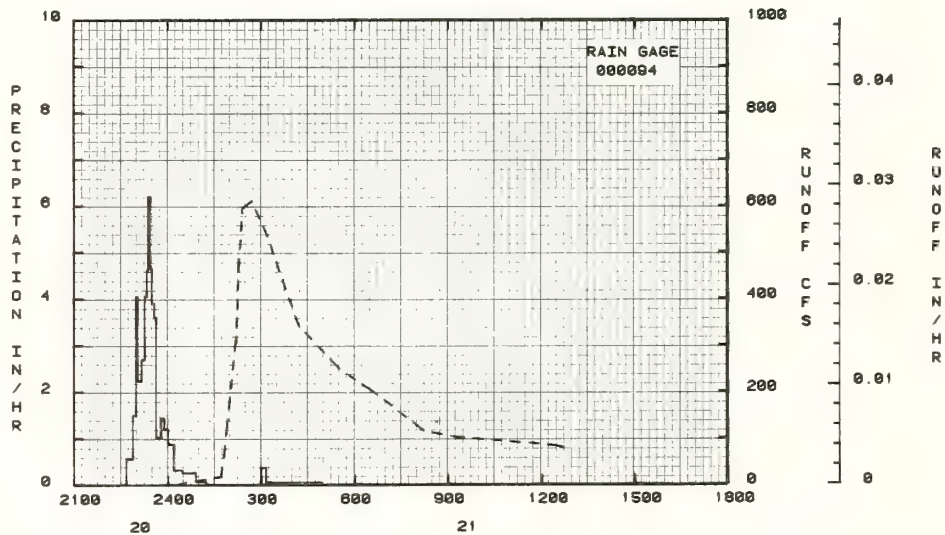
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00004654.



EVENT OF JUNE 13 - 14, 1969
CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 20 - 21, 1969										
RG 000094										
7-20	0.0		7-20	2240	0.0	0.0	7-21	18	1.70	0.0
7-21		0.0		2253	0.5538	0.12		142	17.70	0.0006
				2259	1.5001	0.27		148	64.40	0.0008
				2303	4.0501	0.54		154	122.00	0.0012
				2310	2.2285	0.80		200	187.40	0.0019
WATERSHED CONDITIONS:				2316	2.6998	1.07		212	319.30	0.0042
From a 1967 survey: sowed				2320	4.0501	1.34		218	486.20	0.0060
crop - 5%; row crop - 1%;				2323	4.5997	1.57		224	595.90	0.0086
alfalfa - 2%; pasture and				2326	6.2015	1.88		242	610.60	0.0170
range - 82%; and miscel-				2330	4.6490	2.19		312	534.60	0.0303
laneous - 10%.				2334	3.9001	2.45		412	342.20	0.0507
				2338	3.6001	2.69		530	248.70	0.0686
				2348	1.0201	2.86		642	194.20	0.0810
				2353	1.4398	2.98		812	115.90	0.0918
				2400	1.2000	3.12		912	101.90	0.0969
			7-21	2	0.9000	3.15		1212	84.90	0.1099
				11	0.8667	3.28		1242	78.90	0.1118
				28	0.3176	3.37				
				54	0.2538	3.48				
				113	0.0632	3.50				
				259	0.0057	3.51				
				309	0.3600	3.57				
				455	0.0453	3.65				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00004654.



EVENT OF JULY 20 - 21, 1969
CHICKASHA, OKLAHOMA WATERSHED 621 NEAR TABLER

CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT

LOCATION: Sugar Creek Watershed above Gracemont in Caddo County, Okla.; tributary to Washita River; Red River Basin.
GAGING STATION--NW1/4 sec. 9, T. 8 N., E. 10 W., lat. 35 deg. 11 min., long. 98 deg. 16 min., West side of Gracemont, Okla., on downstream side of county road bridge.

AREA: 131780.00 acres 205.90 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.05	1.54	2.35	1.91	6.63	3.17	1.87	3.06	4.56	1.57	0.17	0.69	27.57	
	Q	0.100	0.122	0.208	0.155	0.991	0.218	0.014	0.025	0.077	0.036	0.030	0.041	2.018	
STA AV	P	0.58	0.95	1.33	2.59	3.72	3.92	1.82	2.86	5.49	1.52	1.76	1.05	27.59	
	Q	0.052	0.373	0.085	0.132	0.270	0.118	0.016	0.031	0.264	0.035	0.043	0.054	1.473	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		5- 4	0.035	5- 4	0.034	5- 4	0.067	5- 4	0.168	5- 4	0.278	5- 4	0.473	5- 4	0.824
MAXIMUMS FOR PERIOD OF RECORD															
		9-21	0.064	9-21	0.062	9-21	0.122	9-21	0.318	9-21	0.497	9-21	0.653	9-21	1.238
		1965		1965		1965		1965		1965		1965		1965	

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 9%; row crop - 13%; alfalfa - 3%; pasture and range - 53%; and miscellaneous - 22%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1963, USDA Misc. Pub. 1164, p. 69.18-4 (Topography) and 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). The stream gaging station was maintained from Oct. 1955 to Oct. 1963 by the U.S. Geological Survey. Precipitation data obtained from a Thiessen weighted average of 32 gages on the watershed. Precipitation records began Oct. 1961; runoff records began Oct. 1963. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969	DAILY PRECIPITATION (inches)					CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.01	0.0	0.0	0.0	0.0
2	0.0	0.0	0.50	0.0	0.0	0.0	0.0	1.44	0.80	0.0	0.13	0.0	0.0
3	0.0	0.0	0.03	0.0	0.89	0.0	0.0	0.02	0.17	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	3.34	0.08	0.0	0.30	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.19	0.0	0.12	0.0	0.0	0.0	0.0	0.03	0.0	0.36	
6	0.0	0.0	0.01	0.0	1.03	0.0	0.01	0.0	0.0	0.18	0.0	0.02	0.0
7	0.0	0.0	0.06	0.0	0.03	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	
11	0.0	0.0	0.0	0.0	0.25	0.06	0.0	0.0	0.01	0.40	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0
13	0.0	0.43	0.0	0.07	0.35	2.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.54	0.14	0.0	0.0	0.41	0.0	0.0	0.03	0.0	0.0	0.0	0.0
15	0.0	0.0	0.02	0.0	0.01	0.0	0.0	0.26	0.62	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.89	0.0	0.0	0.0	0.0	1.77	0.0	0.02	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.03	0.0	0.0	0.0
19	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	
21	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.04	0.0	0.0	0.0
22	0.0	0.0	0.30	0.0	0.0	0.0	0.79	0.52	0.80	0.03	0.0	0.0	0.0
23	0.0	0.08	1.10	0.03	0.0	0.0	0.0	0.02	0.0	0.09	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.30	0.22	0.94	0.40	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.92	0.0	0.0	0.13	0.05	0.0	0.0	0.02	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.01	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.02	0.0	0.12	0.0
29	0.04	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.49	0.0	0.11	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.05	1.54	2.35	1.91	6.63	3.17	1.87	3.06	4.56	1.57	0.17	0.69	
STA AV	0.58	0.95	1.33	2.59	3.72	3.92	1.82	2.86	5.49	1.52	1.76	1.05	

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 32 rain gages on the watershed. STA AV based on 9 yr. (1961-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	21.2	15.9	28.6	25.3	36.0	18.4	4.9	1.3	2.2	7.8	4.5	5.8
2	25.0	15.9	38.7	24.2	36.0	15.9	3.7	46.0	18.5	9.5	4.9	4.9
3	21.2	15.1	49.0	24.2	41.5	14.3	2.5	10.1	12.8	8.9	5.8	4.5
4	21.2	10.7	47.4	23.2	1372.3	13.5	2.2	7.4	2.0	9.5	4.5	4.5
5	19.3	12.8	44.4	20.3	1504.7	12.8	2.2	10.7	1.3	9.5	4.5	5.3
6	19.3	12.8	44.4	20.3	660.9	11.4	3.7	3.7	1.3	10.7	4.1	7.8
7	19.3	15.9	41.5	19.3	425.2	10.1	3.7	2.8	1.1	10.1	4.5	7.8
8	19.3	15.1	38.7	16.7	210.9	7.8	3.4	2.0	0.9	9.5	4.5	7.2
9	15.1	15.1	36.0	18.4	151.0	9.5	3.4	1.5	1.3	8.9	5.3	8.9
10	16.7	14.3	33.5	15.1	122.7	9.5	3.4	1.5	1.5	4.9	5.3	9.5
11	13.5	12.1	31.0	12.8	109.7	7.8	3.7	1.3	1.5	0.0	5.8	9.5
12	15.9	13.5	31.0	14.3	117.4	7.2	3.4	1.5	1.3	13.5	5.8	8.9
13	16.7	15.1	31.0	15.9	90.8	9.5	2.2	1.1	0.9	7.8	5.8	7.8
14	19.3	41.5	29.8	17.6	100.9	589.1	1.1	1.3	1.3	5.8	5.3	7.2
15	20.3	33.5	29.8	17.6	75.9	114.8	1.5	6.1	1.1	4.9	4.9	7.2
16	17.6	29.8	28.6	21.1	58.9	73.9	0.8	1.7	223.5	4.1	7.8	7.8
17	20.3	24.2	26.4	74.9	42.9	60.7	2.0	1.5	18.4	4.1	12.8	7.2
18	19.3	25.3	25.3	36.0	36.0	60.7	2.5	1.1	15.1	3.7	7.8	7.2
19	19.3	26.4	25.3	29.8	33.5	41.5	2.2	1.7	9.5	3.7	7.2	7.0
20	19.3	41.5	24.2	25.3	31.0	24.2	0.9	1.5	6.7	3.1	5.3	7.8
21	19.3	47.4	23.2	23.2	29.8	20.3	0.9	1.5	7.2	3.7	4.9	8.3
22	17.6	34.7	25.3	23.2	25.3	15.9	3.1	2.0	8.9	4.1	5.8	7.8
23	15.1	37.4	120.7	24.2	22.2	12.1	1.3	5.3	34.5	4.9	5.3	7.0
24	15.1	37.4	74.8	35.0	20.3	8.9	0.5	3.1	8.9	5.8	5.3	7.2
25	18.4	32.2	44.4	28.6	23.2	10.7	6.4	3.7	5.8	4.5	4.9	7.2
26	14.3	29.8	36.0	74.2	23.2	7.8	6.2	3.7	5.8	3.4	5.3	7.0
27	14.3	23.2	41.5	68.0	21.2	5.3	1.1	3.4	9.5	5.8	5.3	7.2
28	16.7	24.2	28.6	38.7	20.3	5.3	1.1	2.8	7.8	5.3	4.5	7.0
29	15.1		24.2	34.7	15.1	4.9	1.3	2.2	7.2	7.8	4.1	6.5
30	15.1		25.3	38.7	14.3	4.9	1.3	1.5	7.2	8.9	5.3	8.0
31	15.9		25.3		15.9		1.1	1.7		5.3		10.0
MEAN	17.94	24.03	37.09	28.69	177.07	40.29	2.51	4.41	14.17	6.44	5.57	7.32
INCHES	0.100	0.122	0.208	0.155	0.991	0.218	0.014	0.025	0.077	0.036	0.030	0.041
STA AV	0.052	0.373	0.085	0.132	0.270	0.118	0.016	0.031	0.264	0.035	0.043	0.054

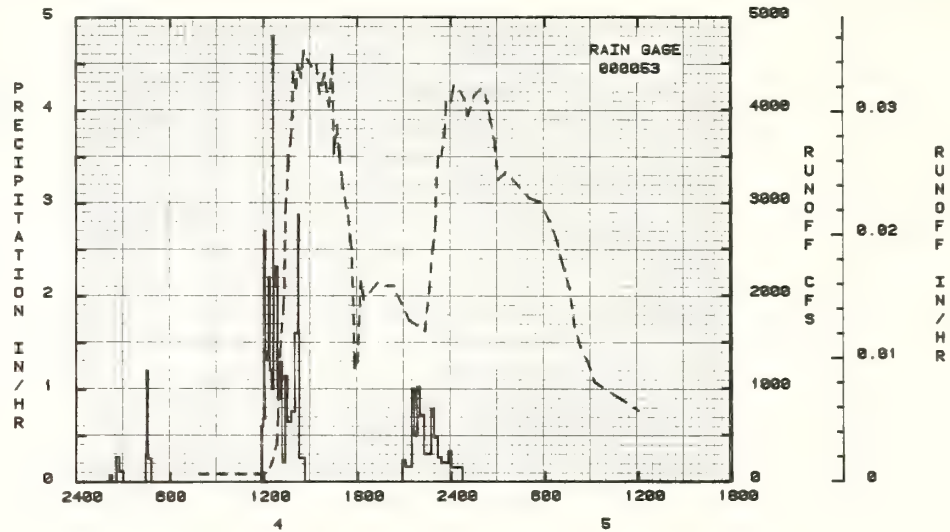
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0001806. To convert discharge in inches to AC-FT, multiply by 10,982. STA AV based on 7 yr (1963-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF MAY 4 - 5, 1969												
5- 4	RG 000053		5- 4	RG 000053			5- 4					
	0.0	0.005		208	0.0	0.0		748	88.60	0.0		
				216	0.0750	0.01		1136	82.10	0.0024		
				234	0.0	0.01		1206	96.10	0.0027		
				245	0.2727	0.06		1224	157.70	0.0030		
				300	0.1200	0.09		1236	255.90	0.0033		
WATERSHED CONDITIONS:					425	0.0	0.09	1248	406.20	0.0038		
From a 1967 survey; sowed					429	0.3000	0.11	1254	681.20	0.0042		
crop - 9%; row crop - 13%;					435	1.2000	0.23	1300	1246.30	0.0049		
alfalfa - 3%; pasture and					447	0.2500	0.28	1306	1508.30	0.0059		
range - 53%; and miscel-					1150	0.0	0.28	1318	1985.50	0.0085		
laneous - 22%.												
				1157	0.6000	0.35		1324	2948.50	0.0104		
				1204	0.6857	0.43		1330	3149.40	0.0127		
				1208	2.7000	0.61		1336	3518.20	0.0152		
				1218	1.3200	0.83		1342	3641.60	0.0179		
				1224	2.2000	1.05		1348	3796.80	0.0207		
				1231	1.2000	1.19		1354	4418.18	0.0238		
				1237	1.0000	1.29		1406	4235.29	0.0303		
				1240	4.8000	1.53		1412	4498.18	0.0336		
				1246	2.1000	1.74		1424	4350.79	0.0403		
				1253	2.3143	2.01		1436	4643.48	0.0471		
				1303	0.9000	2.16		1448	4549.48	0.0540		
				1310	1.2857	2.31		1506	4472.38	0.0642		
				1321	0.2182	2.35		1524	4491.88	0.0743		
				1331	1.1400	2.54		1536	4174.18	0.0808		
				1344	0.6462	2.68		1554	4392.98	0.0905		
				1359	0.7600	2.87		1612	4037.20	0.1000		
				1411	1.6000	3.19		1624	4589.29	0.1065		
				1416	2.8800	3.43		1630	3532.20	0.1096		
				1437	0.2571	3.52		1642	3839.10	0.1151		
				2050	0.0	3.52		1648	3603.40	0.1179		
				2103	0.2308	3.57		1654	3432.70	0.1206		
				2129	0.1615	3.64		1706	3153.50	0.1256		
				2138	0.9999	3.79		1718	2941.50	0.1302		
				2149	0.4909	3.88		1724	2864.30	0.1324		
				2159	1.0201	4.05		1736	2501.80	0.1364		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000007526.

1969			SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 121 AT GRACEMONT		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	(inches)	No-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 4 - 5, 1969 (CONTINUED)											
5- 4	2215	0.7125	4.24	5- 4	1742	2097.00	0.1381				
	2243	0.3000	4.38		1748	1225.00	0.1393				
	2253	0.7800	4.51		1800	1280.10	0.1412				
	2308	0.4800	4.63		1812	2156.40	0.1438				
	2322	0.2572	4.69		1824	1960.00	0.1469				
5- 5	2349	0.2000	4.78		1918	2143.00	0.1608				
	2400	0.3273	4.84		1948	2106.60	0.1688				
	43	0.1535	4.95		2018	2109.30	0.1767				
					2048	1916.70	0.1843				
					2118	1735.30	0.1912				
					2218	1621.90	0.2038				
					2236	2050.10	0.2079				
					2248	2472.60	0.2113				
					2254	2534.70	0.2132				
					2300	2757.20	0.2152				
					2306	3273.10	0.2175				
					2312	3505.50	0.2201				
					2324	3504.70	0.2254				
					2336	3745.70	0.2309				
					2342	4082.10	0.2338				
					2400	4072.90	0.2430				
					12	4264.09	0.2493				
					36	4211.98	0.2621				
					54	4109.99	0.2745				
					106	3936.60	0.2776				
					130	4149.88	0.2898				
					154	4225.59	0.3024				
					212	4168.78	0.3119				
					230	3917.00	0.3210				
					248	3661.00	0.3295				
					300	3244.80	0.3347				
					330	3327.70	0.3471				
					400	3238.70	0.3595				
					500	3046.00	0.3831				
					542	3008.40	0.3990				
					618	2799.40	0.4121				
					642	2628.50	0.4203				
					706	2361.90	0.4278				
					736	2064.40	0.4361				
					754	1661.10	0.4403				
					818	1437.40	0.4450				
					842	1297.30	0.4491				
					912	1066.20	0.4535				
					1112	846.40	0.4679				
					1200	757.40	0.4727				

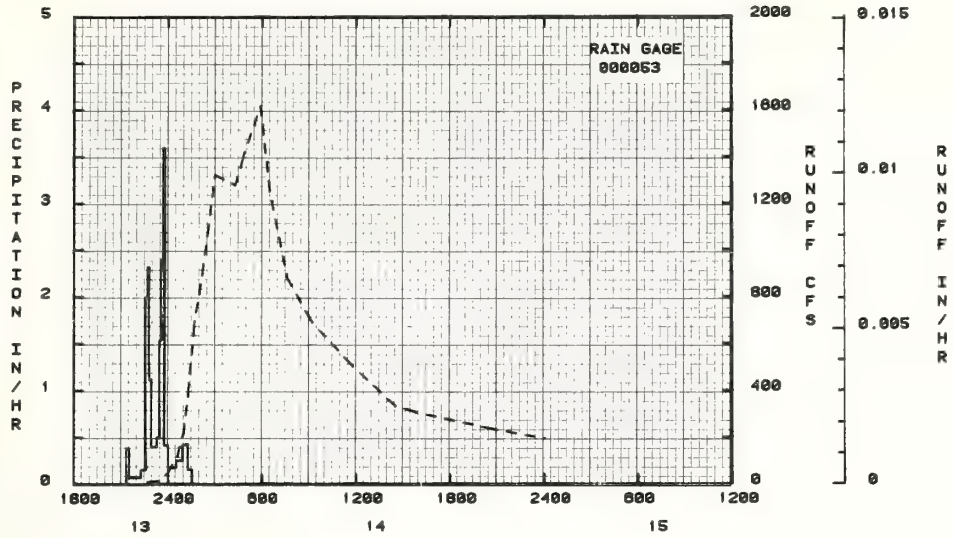
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000007526.



EVENT OF MAY 4 - 5, 1969
CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 13 - 14, 1969										
6-13	RG 000053		6-13	2120	0.0	0.0	6-13	2242	11.80	0.0
	0.0	0.002		2131	0.3818	0.07		2324	13.30	0.0001
				2216	0.0667	0.12		2400	48.80	0.0002
				2236	0.1500	0.17	6-14	36	121.70	0.0006
				2242	1.9999	0.37		100	216.80	0.0011
WATERSHED CONDITIONS: From a 1967 survey; sowed crop - 9%; row crop - 13%; alfalfa - 3%; pasture and range - 53%; and miscel- laneous - 22%.				2249	2.3142	0.64		118	394.90	0.0018
				2256	1.1144	0.77		142	695.70	0.0034
				2317	0.4000	0.91		212	901.10	0.0064
				2329	0.5000	1.01		236	1110.70	0.0094
				2336	1.5428	1.19		300	1320.70	0.0131
				2341	2.4001	1.39		418	1277.80	0.0258
				2344	3.6009	1.57		454	1423.50	0.0319
				2400	0.4125	1.68		554	1615.70	0.0433
				31	0.1742	1.77		630	1250.80	0.0498
				57	0.2538	1.88		736	881.00	0.0586
				110	0.4154	1.97		912	689.70	0.0681
				117	0.4286	2.02		1148	501.10	0.0797
				133	0.1500	2.06		1430	332.20	0.0882
					1554	304.20	0.0916			
					2100	229.60	0.1018			
						2400	192.70	0.1066		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000007526.



EVENT OF JUNE 13 - 14, 1969
CHICKASHA, OKLAHOMA WATERSHED 121 AT GRACEMONT

CHICKASHA, OKLAHOMA WATERSHED 513 NEAR TABLER

LOCATION: Bedingfield Watershed is the West branch of East Bitter Creek 1.4 miles above East Bitter Creek gaging station, in Grady County, Okla.; tributary to East Bitter Creek; Washita River; Red River Basin. GAGING STATION--SE1/4 sec. 22, T. 7 N., R. 6 W., lat. 35 deg. 03 min. 53 sec., long. 97 deg. 49 min. 13 sec.

AREA: 12314.00 acres 19.24 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)													CHICKASHA, OKLAHOMA WATERSHED 513 NEAR TABLER	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P 0.64	2.43	2.06	1.33	4.92	4.14	3.81	2.84	4.01	1.47	0.35	1.46	29.46	
	Q 0.073	0.151	0.236	0.182	1.042	0.858	0.369	0.042	0.136	0.056	0.067	0.082	3.293	
STA AV	P 1.08	1.33	1.80	3.35	3.35	2.52	2.50	4.14	3.83	1.54	1.22	1.04	27.70	
	Q 0.099	0.106	0.180	0.493	0.349	0.240	0.118	0.269	0.198	0.050	0.073	0.072	2.248	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		1 Day		2 Days		8 Days	
	Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	6-14	0.138	6-14	0.136	6-14	0.263	6-14	0.539	6-14	0.611	6-14	0.651	6-14	0.688
													5- 3	0.802
MAXIMUMS FOR PERIOD OF RECORD														
	8- 8	0.169	8- 8	0.164	8- 8	0.307	8- 7	0.562	6-14	0.611	6-14	0.651	4-12	0.754
1965	1965		1965		1965		1965		1969		1969		1967	4- 9 0.875

NOTES: Watershed conditions: From a 1967 survey; sowed crop - 5%; row crop - 1%; alfalfa - 2%; pasture and range - 90%; and miscellaneous - 2%. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.16.8 (Topography) and p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 18 gages on the watershed. Precipitation and runoff records began Jan. 1965. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED 513 NEAR TABLER	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.44	0.0	0.0	0.0	0.0	0.45	0.53	0.0	0.02	0.0		
3	0.0	0.0	0.04	0.0	1.57	0.0	0.0	0.0	0.06	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.08	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.13	0.0	0.36	0.0	0.0	0.0	0.0	0.16	0.0	0.0		0.69
6	0.0	0.0	0.0	0.0	1.72	0.0	0.0	0.0	0.0	0.23	0.0	0.0		0.02
7	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
11	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.12	0.0	0.0	0.0		0.0
12	0.0	0.0	0.0	0.05	0.46	0.02	0.0	0.0	0.0	0.46	0.0	0.0		0.0
13	0.0	0.50	0.0	0.07	0.01	1.48	0.0	0.0	0.0	0.0	0.0	0.0		0.0
14	0.0	1.04	0.06	0.0	0.01	2.15	0.0	0.0	0.12	0.0	0.0	0.0		0.0
15	0.0	0.02	0.01	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0	0.0		0.0
16	0.0	0.0	0.0	0.36	0.37	0.0	0.0	0.0	1.65	0.0	0.0	0.0		0.0
17	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
18	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0		0.0
19	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
20	0.0	0.57	0.0	0.0	0.0	0.0	3.03	0.0	0.0	0.02	0.0	0.0		0.08
21	0.0	0.23	0.0	0.0	0.0	0.0	0.01	0.0	0.64	0.03	0.0	0.0		0.0
22	0.0	0.0	0.35	0.0	0.0	0.0	0.10	0.81	0.89	0.04	0.0	0.0		0.0
23	0.0	0.06	1.00	0.20	0.0	0.0	0.0	0.12	0.0	0.20	0.0	0.0		0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.88	0.0	0.0	0.0	0.0		0.0
26	0.0	0.0	0.0	0.65	0.0	0.0	0.02	0.0	0.0	0.0	0.33	0.0		0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0		0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.38		0.0
29	0.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.26		0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03		0.0
31	0.07	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0		0.0
TOTAL	0.64	2.43	2.06	1.33	4.92	4.14	3.81	2.84	4.01	1.47	0.35	1.46		
STA AV	1.08	1.33	1.80	3.35	3.35	2.52	2.50	4.14	3.83	1.54	1.22	1.04		

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 18 rain gages on the watershed. STA AV based on 5 yr (1965-69) record period.

1969	MEAN DAILY DISCHARGE (cfs)					CHICKASHA, OKLAHOMA				WATERSHED 513 NEAR TABLER			
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.00	1.40	2.30	3.40	2.30	3.80	1.10	0.70	0.30	0.90	1.30	1.30	
2	1.40	1.30	2.70	3.30	2.20	2.70	1.10	1.00	0.92	0.80	1.20	1.30	
3	1.40	1.10	4.30	3.20	50.87	2.70	1.00	1.20	0.90	0.70	1.20	1.30	
4	0.80	1.10	3.80	3.10	27.95	2.80	0.80	0.90	0.80	0.60	1.10	1.30	
5	1.30	1.20	3.40	2.80	26.89	2.70	0.70	0.90	0.50	0.70	1.10	1.60	
6	1.30	1.20	3.70	2.70	172.18	2.40	0.70	1.00	0.30	1.10	1.10	2.40	
7	1.30	1.10	3.30	2.80	92.91	2.20	0.60	0.70	0.30	1.10	1.10	1.70	
8	1.30	1.00	3.10	2.80	19.20	2.10	0.50	0.50	0.20	0.90	1.10	1.50	
9	1.10	1.00	2.60	2.80	12.00	2.10	0.50	0.40	0.20	0.80	1.10	1.50	
10	1.00	1.00	2.60	2.60	9.70	2.30	0.50	0.30	0.20	0.80	1.10	1.40	
11	1.00	1.00	2.60	2.50	7.90	2.00	0.30	0.20	0.40	0.60	1.10	1.30	
12	1.10	1.00	2.70	2.60	13.86	1.80	0.30	0.20	0.40	1.20	1.10	1.30	
13	1.10	1.10	2.60	3.00	8.10	2.20	0.20	0.10	0.30	1.20	1.10	1.30	
14	1.10	7.16	2.60	2.80	7.00	337.00	0.20	0.10	0.20	1.00	1.00	1.30	
15	1.20	8.82	2.80	2.60	6.60	19.50	0.10	0.20	0.40	1.00	1.00	1.30	
16	1.30	3.20	2.70	2.60	6.80	10.20	0.10	0.40	20.98	0.80	1.10	1.30	
17	1.30	2.60	2.50	3.50	9.00	6.80	0.10	0.20	2.20	0.80	1.20	1.30	
18	1.10	2.20	2.50	2.70	7.00	6.00	0.10	0.10	1.50	0.90	1.00	1.30	
19	1.10	2.00	2.40	2.50	6.20	4.50	0.0 T	0.10	1.20	0.90	1.00	1.30	
20	1.20	6.82	2.20	2.40	5.70	3.90	2.96	0.10	1.10	0.80	1.10	1.30	
21	1.30	6.60	2.20	2.30	5.10	3.40	157.44	0.0 T	1.30	0.80	1.30	1.40	
22	1.30	5.50	2.40	2.30	4.60	3.50	6.00	0.05	2.73	0.80	1.20	1.30	
23	1.10	3.80	23.58	2.40	4.80	2.80	3.00	3.93	22.58	1.10	1.10	1.20	
24	1.00	3.50	9.73	2.70	4.90	2.60	1.70	0.80	2.80	1.10	1.20	1.40	
25	1.10	3.10	5.10	2.40	4.50	2.30	1.71	2.61	1.80	0.90	1.20	1.20	
26	1.10	3.00	4.20	4.80	4.10	2.40	3.92	1.91	1.50	0.90	1.30	1.30	
27	1.20	2.70	3.90	11.98	3.80	2.20	1.70	0.90	1.50	0.90	1.60	1.30	
28	1.10	2.40	3.80	3.20	3.50	1.80	1.10	0.80	1.10	1.00	1.30	1.30	
29	1.80		3.30	2.80	3.30	1.60	0.90	0.60	1.00	1.20	1.30	1.30	
30	1.80		3.20	2.50	3.20	1.40	0.70	0.50	1.00	1.50	1.30	1.20	
31	1.40		3.30		2.90		0.70	0.40		1.20		1.10	
MEAN	1.213	2.782	3.939	3.136	17.390	14.790	6.153	0.703	2.353	0.936	1.163	1.365	
INCHES	0.073	0.151	0.236	0.182	1.042	0.858	0.369	0.042	0.136	0.056	0.067	0.082	
STA 1V	0.099	0.106	0.180	0.493	0.349	0.240	0.118	0.269	0.198	0.050	0.073	0.072	

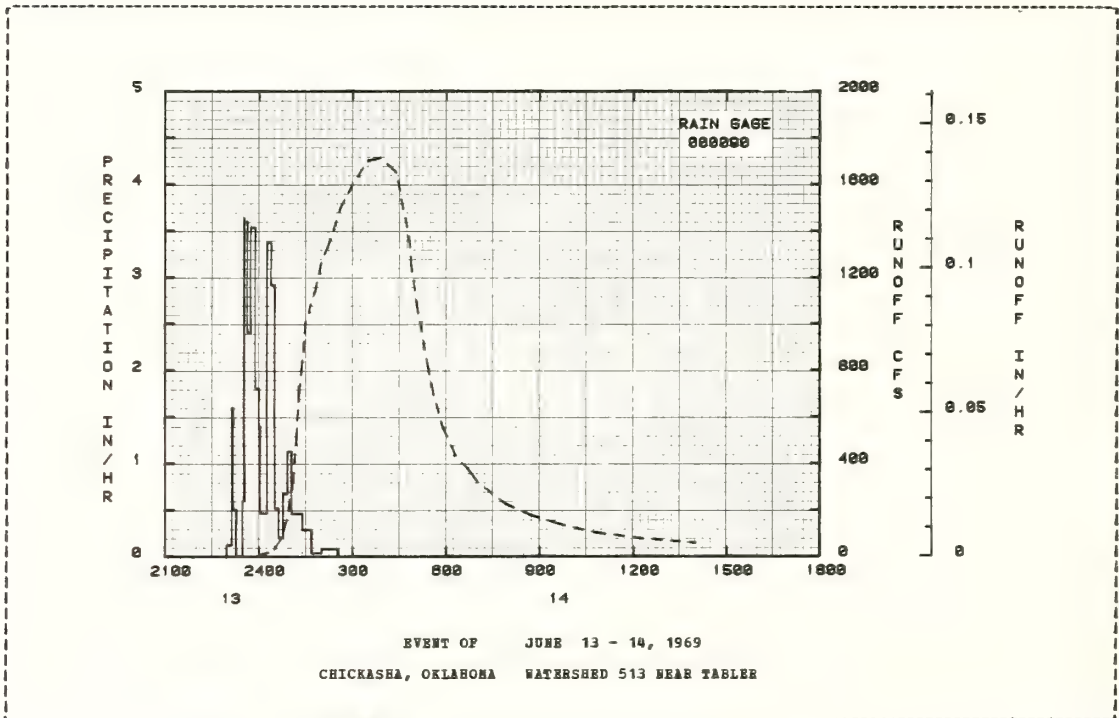
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.001933. To convert discharge in inches to AC-FT, multiply by 1,026. STA 1V based on 5 yr (1965-69) record period.

1969	SELECTED RUNOFF EVENT				CHICKASHA, OKLAHOMA				WATERSHED 513 NEAR TABLER			
ANTECEDENT CONDITIONS				RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JUNE 13 - 14, 1969												
RG 000090				RG 000090								
6-13	0.0	0.004	6-13	2258	0.0	0.0	6-13	2400	2.20	0.0		
				2308	0.1200	0.02	6-14	1	9.70	0.0		
				2311	1.6004	0.10		6	11.40	0.0001		
				2317	0.5000	0.15		18	17.40	0.0003		
				2329	0.0	0.15		30	32.70	0.0007		
WATERSHED CONDITIONS:				2333	0.6000	0.19		42	72.50	0.0015		
From a 1967 survey; sowed				2338	3.5996	0.49		48	114.30	0.0023		
crop - 5%; row crop - 1%;				2344	2.4002	0.73		54	157.60	0.0034		
alfalfa - 2%; pasture and				2353	3.5331	1.26		100	243.90	0.0050		
range - 90%; and miscel-				2400	1.8000	1.47		106	319.20	0.0073		
laneous - 2%.												
			6-14	3	1.4000	1.54		112	508.20	0.0106		
				16	0.4615	1.64		118	701.40	0.0155		
				24	3.3750	2.09		124	842.50	0.0217		
				31	2.9143	2.43		130	1008.00	0.0292		
				38	0.5143	2.49		148	1137.40	0.0551		
				47	0.2000	2.52		200	1262.00	0.0744		
				55	0.6750	2.61		218	1364.50	0.1061		
				103	1.1250	2.76		236	1493.00	0.1406		
				124	0.4571	2.92		300	1600.90	0.1905		
				141	0.2824	3.00		330	1701.90	0.2570		
				201	0.0300	3.01		354	1713.40	0.3120		
				233	0.0750	3.05		424	1650.90	0.3797		
								448	1369.60	0.4283		
								454	1224.30	0.4388		
								506	1045.80	0.4571		
								524	824.00	0.4797		
								536	694.80	0.4919		
								554	551.10	0.5070		
								618	431.70	0.5228		
								642	372.70	0.5358		
								700	319.20	0.5442		
								754	225.80	0.5639		
								842	178.10	0.5769		
								948	131.10	0.5906		
								1048	101.10	0.6000		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00008054.

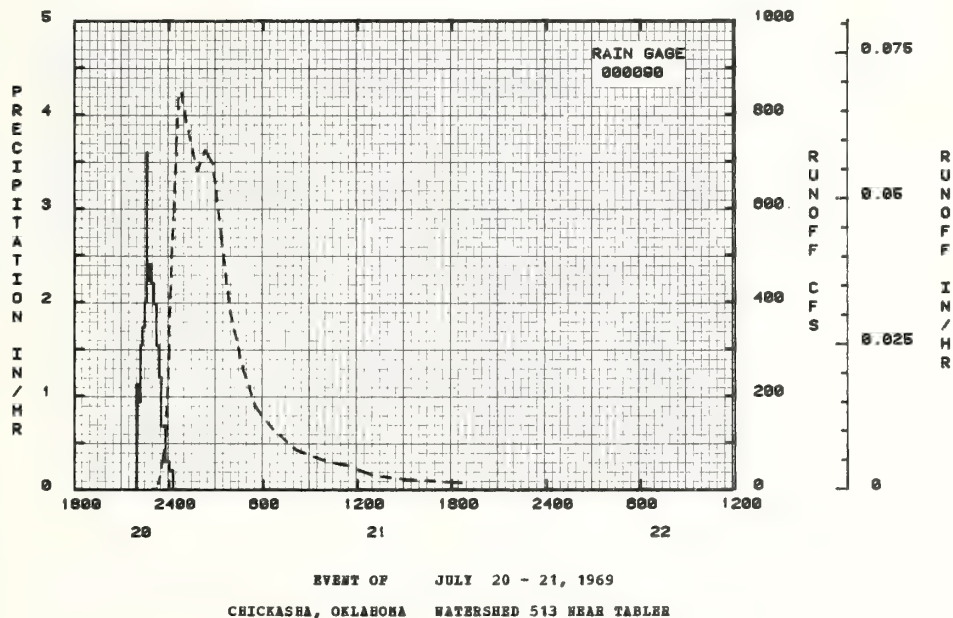
1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 513 NEAR TABLER					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	Mo-Day	of Day	(cfs)
					Acc. (inches)			Acc. (inches)
EVENT OF JUNE 13 - 14, 1969 (CONTINUED)								
						6-14	1218	75.10
							1400	57.50
								0.6106
								0.6197

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00008054.



1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA				WATERSHED 513 NEAR TABLER			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JULY 20 - 21, 1969										
7-20	0.0	0.0	7-20	2155	0.0	0.0	7-20	2254	0.10	0.0
				2203	1.1250	0.15		2312	2.50	0.0
				2212	0.9333	0.29		2318	12.00	0.0001
				2219	1.5428	0.47		2324	27.80	0.0003
				2228	1.7334	0.73		2336	64.30	0.0010
				2234	1.9999	0.93		2348	116.60	0.0025
				2239	3.6002	1.23		2354	198.60	0.0038
				2246	2.2285	1.49		2400	289.20	0.0058
				2253	2.4000	1.77	7-21	6	434.40	0.0086
				2302	2.2001	2.10		18	593.70	0.0168
				2312	1.9799	2.43		30	752.50	0.0278
				2321	1.5334	2.66		36	835.10	0.0340
				2330	1.1999	2.84		48	846.30	0.0475
				2346	0.6750	3.02		106	784.20	0.0672
				2400	0.3000	3.09		148	678.40	0.1084
			7-21	15	0.2000	3.14		218	725.00	0.1367
								248	694.80	0.1653
								324	520.20	0.1947
								354	380.10	0.2128
								442	259.10	0.2334
								530	176.60	0.2474
								636	128.60	0.2609
								806	83.30	0.2737
								954	61.20	0.2842
								1124	50.40	0.2909
								1254	30.20	0.2958
								1506	20.30	0.3003
								1836	13.90	0.3051

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00008054.



CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET

LOCATION: Salt Creek Watershed 1/2 mile East of U.S. highway 81 near Pocasset, in Grady County, Okla.; tributary to Washita River; Red River Basin. GAGING STATION--NW1/4 sec. 28, T. 8 N., R. 7 W., lat. 35 deg. 08 min. 44 sec., long. 97 deg. 57 min. 30 sec.

AREA: 15206.00 acres 23.76 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																	
1969	P	0.13	2.00	2.00	3.08	5.55	3.88	1.19	3.41	4.32	1.32	0.14	0.84	27.86																	
	Q	0.015	0.017	0.050	0.433	1.733	0.237	0.008	0.004	0.031	0.0	0.001	0.010	2.538																	
STA AV	P	0.95	1.03	1.64	4.15	4.42	3.23	1.84	2.18	4.22	2.19	1.56	0.87	28.29																	
	Q	0.011	0.012	0.027	0.804	0.644	0.128	0.006	0.003	0.034	0.108	0.036	0.010	1.823																	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		5- 6	0.075	5- 6	0.075	5- 6	0.149	5- 6	0.430	5- 6	0.684	5- 6	0.805	5- 5	1.161	5- 3	1.628														
MAXIMUMS FOR PERIOD OF RECORD																															
		4-12	0.320	4-12	0.314	4-12	0.600	4-12	1.201	4-12	1.310	4-12	1.338	4-12	1.424	4- 9	1.720														
		1967		1967		1967		1967		1967		1967		1967		1967															

NOTES: Watershed conditions: 36% of area in cultivation (alfalfa, sowed crops and row crops; the pasture or range land (64%) is mostly short grass on moderately steep slopes. About 10% is severely eroded. For maps of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 69.27-4 (Topography) and 1965, USDA Misc. Pub. 1216, p. 69.7-21 (Composite). Precipitation data obtained from a Thiessen weighted average of 9 gages on the watershed. Precipitation and runoff records began Jan. 1967. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET												
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
1	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0	0.0												
2	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	1.25	1.19	0.0	0.06	0.0												
3	0.0	0.0	0.0	0.02	0.0	1.44	0.0	0.0	0.01	0.17	0.0	0.0	0.0												
4	0.0	0.0	0.0	0.0	0.0	1.24	0.0	0.0	0.13	0.0	0.0	0.0	0.0												
5	0.0	0.0	0.0	0.14	0.0	0.41	0.0	0.0	0.0	0.0	0.16	0.0	0.39												
6	0.0	0.0	0.0	0.01	0.0	1.85	0.0	0.0	0.0	0.0	0.20	0.0	0.02												
7	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
11	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.05	0.06	0.0	0.0												
12	0.0	0.0	0.0	0.0	0.02	0.27	0.0	0.0	0.0	0.0	0.21	0.0	0.0												
13	0.0	0.41	0.0	0.04	0.05	1.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
14	0.0	0.86	0.12	0.0	0.0	1.02	0.0	0.0	0.0	0.08	0.0	0.0	0.0												
15	0.0	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0	0.0												
16	0.0	0.0	0.0	0.0	1.66	0.09	0.0	0.0	0.0	1.62	0.0	0.01	0.0												
17	0.0	0.0	0.0	0.0	0.0	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0												
18	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.01	0.0	0.0												
19	0.02	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
20	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.03	0.0	0.09												
21	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.05	0.0	0.0												
22	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.18	0.70	0.67	0.02	0.0	0.0												
23	0.0	0.13	0.89	0.21	0.0	0.0	0.02	0.0	0.04	0.0	0.21	0.0	0.0												
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
25	0.0	0.0	0.0	0.0	0.0	0.01	1.11	0.74	0.56	0.0	0.0	0.0	0.0												
26	0.0	0.0	0.0	0.0	1.15	0.0	0.0	0.22	0.02	0.0	0.0	0.07	0.0												
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14												
29	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.20												
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
31	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
TOTAL		0.13	2.00	2.00	3.08	5.55	3.88	1.19	3.41	4.32	1.32	0.14	0.84												
STA AV		0.95	1.03	1.64	4.15	4.42	3.23	1.84	2.18	4.22	2.19	1.56	0.87												

NOTES: For daily air temperatures in the vicinity, see table for Watershed W-700, (69.007) of this publication. Precipitation values are a Thiessen weighted average of 9 rain gages on the watershed. STA AV based on 3 yr (1967-69) record period.

1969 MEAN DAILY DISCHARGE (cfs) CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.20	0.20	0.20	0.20	1.20	0.70	0.40	0.10	0.0	0.0	0.0	0.20
2	0.30	0.20	0.30	0.20	0.90	1.00	0.30	1.45	0.30	0.0	0.0	0.20
3	0.30	0.20	0.50	0.20	8.63	0.90	0.30	0.20	0.20	0.0	0.0	0.20
4	0.30	0.20	0.40	0.20	90.58	0.80	0.30	0.20	0.10	0.0	0.0	0.20
5	0.30	0.20	0.30	0.20	370.49	0.80	0.20	0.20	0.0 T	0.0	0.0	0.20
6	0.40	0.20	0.90	0.20	278.43	0.70	0.20	0.10	0.0	0.0	0.0	0.40
7	0.40	0.30	0.80	0.20	265.73	0.60	0.20	0.10	0.0	0.0	0.0	0.30
8	0.40	0.20	0.60	0.20	15.25	0.60	0.20	0.0 T	0.0	0.0	0.0	0.20
9	0.30	0.20	0.50	0.20	7.80	0.50	0.20	0.0	0.0	0.0	0.0	0.20
10	0.30	0.30	0.50	0.20	5.50	0.50	0.20	0.0	0.0	0.0	0.0	0.20
11	0.30	0.40	0.40	0.20	4.00	0.50	0.20	0.0	0.0	0.0	0.0	0.20
12	0.40	0.40	0.40	0.20	7.26	0.40	0.20	0.0	0.0	0.0	0.0	0.20
13	0.30	0.50	0.50	0.30	4.80	0.75	0.20	0.0	0.0	0.0	0.0	0.20
14	0.40	0.90	0.50	0.30	3.90	87.99	0.20	0.0	0.0	0.0	0.0	0.20
15	0.40	0.60	0.60	0.20	4.30	8.91	0.10	0.0	0.0	0.0	0.0	0.20
16	0.40	0.30	0.60	29.53	4.00	2.00	0.10	0.0	7.72	0.0	0.0	0.20
17	0.40	0.20	0.60	127.28	3.80	1.40	0.10	0.0	3.01	0.0	0.0	0.20
18	0.30	0.20	0.60	5.38	3.80	1.10	0.10	0.0	0.20	0.0	0.0	0.20
19	0.30	0.20	0.60	1.90	3.70	1.00	0.10	0.0	0.10	0.0	0.0	0.20
20	0.30	0.70	0.50	1.30	3.20	0.90	0.10	0.0	0.10	0.0	0.0	0.20
21	0.30	0.30	0.40	0.90	2.80	0.80	0.10	0.0	0.20	0.0	0.0	0.20
22	0.20	1.10	0.50	0.70	2.40	0.60	0.10	0.0	0.80	0.0	0.0	0.20
23	0.20	0.80	7.81	1.04	2.30	0.50	0.10	0.0	3.09	0.0	0.0	0.20
24	0.20	0.70	8.84	0.50	2.20	0.40	0.10	0.0	3.05	0.0	0.0	0.20
25	0.20	0.40	2.20	0.40	2.10	0.40	0.20	0.0	0.50	0.0	0.0	0.20
26	0.20	0.40	0.70	37.80	1.80	29.71	0.20	0.0	0.10	0.0	0.10	0.20
27	0.30	0.40	0.30	58.55	1.60	4.04	0.10	0.0	0.10	0.0	0.20	0.20
28	0.30	0.20	0.20	4.49	1.40	1.30	0.10	0.0	0.10	0.0	0.10	0.20
29	0.30		0.20	2.10	1.30	0.80	0.10	0.0	0.0 T	0.0	0.10	0.20
30	0.20		0.20	1.50	1.10	0.50	0.10	0.0	0.0	0.0	0.10	0.20
31	0.20		0.20		0.90		0.10	0.0		0.0		0.20
MEAN	0.300	0.389	1.028	9.219	35.714	5.037	0.168	0.076	0.655	0.0	0.020	0.210
INCHES	0.015	0.017	0.050	0.433	1.733	0.237	0.008	0.004	0.031	0.0	0.001	0.010
STA AV	0.011	0.012	0.027	0.804	0.644	0.128	0.006	0.003	0.034	0.108	0.036	0.010

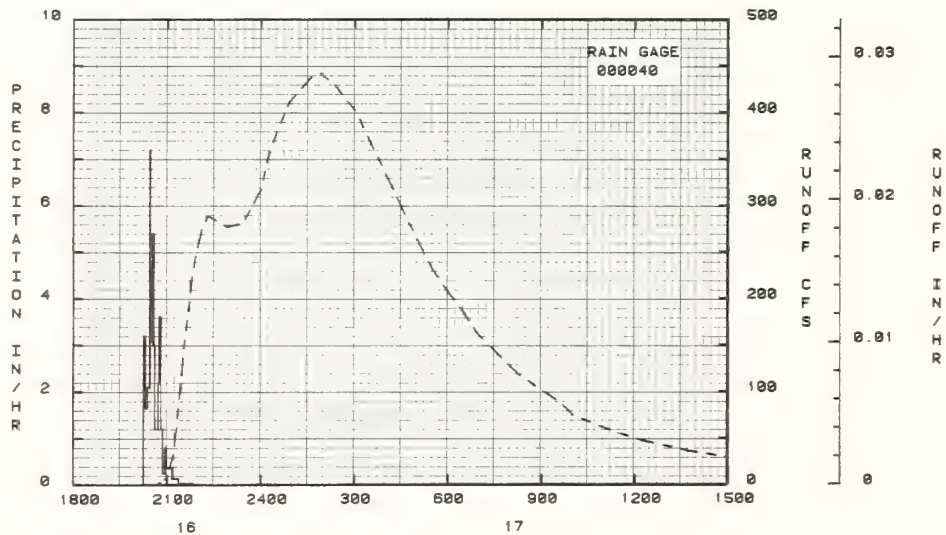
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.001565. To convert discharge in inches to AC-FT, multiply by 1,267. STA AV based on 3 yr (1967-69) record period.

1969 SELECTED RUNOFF EVENT CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET											
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)	
EVENT OF APRIL 16 - 17, 1969											
RG 000040			RG 000040								
4-16	0.0	0.000	4-16	2015	0.0	0.0	4-16	2012	0.20	0.0	
				2018	3.2008	0.16		2030	0.40	0.0	
				2022	1.6500	0.27		2042	1.10	0.0	
				2026	2.1000	0.41		2048	2.10	0.0	
				2027	7.1952	0.53		2054	5.90	0.0	
WATERSHED CONDITIONS: 36% of area in cultivation, alfalfa, sowed crops and row crops; the pasture or range land (64%) is mostly short grass on moderately steep slopes. About 10% is severely eroded.				2030	4.3997	0.75		2100	8.90	0.0	
				2032	3.9010	0.88		2106	19.60	0.0001	
				2034	5.3989	1.06		2112	32.40	0.0003	
				2036	3.0007	1.16		2118	62.00	0.0006	
				2042	1.1999	1.28		2124	98.40	0.0011	
				2045	2.1999	1.39		2130	136.10	0.0019	
				2048	3.6009	1.57		2136	166.80	0.0029	
				2051	1.1999	1.63		2148	223.80	0.0054	
				2056	0.2400	1.65		2154	245.70	0.0069	
				2059	0.8000	1.69		2206	274.00	0.0103	
				2109	0.3600	1.75		2218	288.90	0.0140	
				2122	0.1385	1.78		2254	277.20	0.0251	
				2151	0.0207	1.79		2318	280.10	0.0324	
								2330	265.80	0.0361	
								2400	317.40	0.0459	
							4-17	12	348.20	0.0502	
								30	379.30	0.0573	
								54	411.10	0.0676	
								118	426.40	0.0785	
								136	438.10	0.0870	
								154	441.50	0.0956	
								224	427.30	0.1098	
								300	402.00	0.1260	
								336	361.00	0.1409	
								406	326.50	0.1521	
								436	290.60	0.1622	
								506	257.20	0.1741	
								530	231.00	0.1775	
								600	206.40	0.1846	
								630	184.70	0.1910	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00006522.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET								
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF APRIL 16 - 17, 1969 (CONTINUED)											
							4-17	654	163.70	0.1955	
								742	136.50	0.2033	
								818	116.70	0.2083	
								912	96.80	0.2146	
								948	81.60	0.2181	
								1000	74.30	0.2191	
								1112	58.10	0.2243	
								1218	46.20	0.2280	
								1342	36.00	0.2338	
								1500	28.40	0.2345	

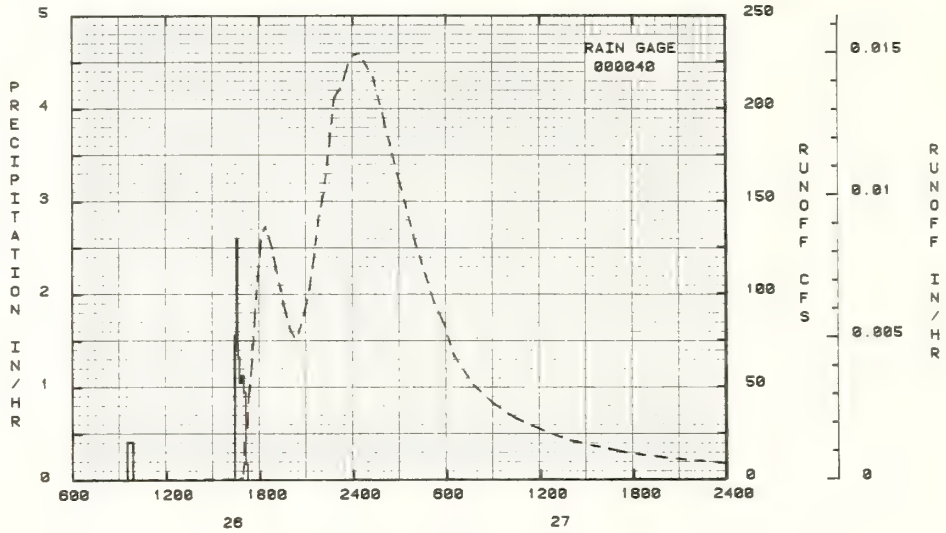
NOTES: To convert runoff in CPS to IN/HR, multiply by 0.00006522.



EVENT OF APRIL 16 - 17, 1969
CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET

1969 SELECTED RUNOFF EVENT			CHICKASAW, OKLAHOMA			WATERSHED 311 NEAR POCASSET		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
								Rate (cfs)
								Acc. (inches)
EVENT OF APRIL 26 - 27, 1969								
RG 000040			RG 000040					
4-26	0.0	0.0	4-26	930	0.0	0.0	4-26	1
				949	0.4105	0.13		1624
				1622	0.0	0.13		1636
				1627	1.5598	0.26		1648
				1633	1.4001	0.40		1654
WATERSHED CONDITIONS: 36% of area in cultivation, alfalfa, sowed crops and row crops; the pasture or range land (64%) is mostly short grass on moderately steep slopes. About 10% is severely eroded.				1636	2.5998	0.53		1700
				1641	1.3201	0.64		1706
				1649	1.0499	0.78		1712
				1657	1.1250	0.93		1718
				1704	0.9428	1.04		1730
				1711	0.1715	1.06		1736
								1742
								1754
								1806
								1818
								1824
								1848
								1906
								1936
								1954
								2012
								2030
								2054
								2112
								2130
								2148
								2206
								2230
								2248
								2312
								2342
								2400
							4-27	24
								118
								206
								306
								354
								436
								512
								554
								624
								742
								854
								1018
								1212
								1400
								1730
								2006
								2400

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00006522.



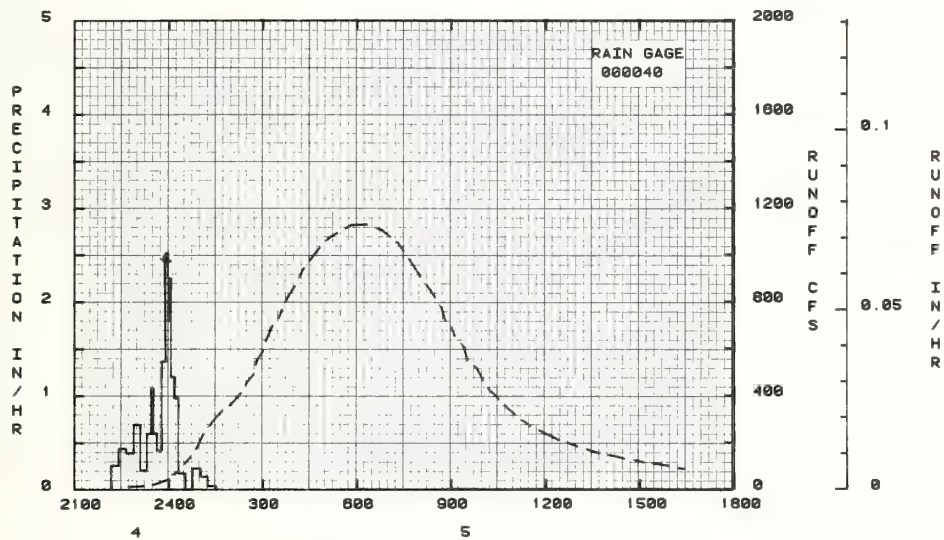
EVENT OF APRIL 26 - 27, 1969
CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 4 - 5, 1969										
5- 4	RG 000040		5- 4	RG 000040			5- 4	2242	12.30	0.0
	0.0	0.140		2210	0.0	0.0		2312	17.60	0.0005
				2224	0.2571	0.06		2330	20.60	0.0009
				2239	0.4400	0.17		2400	44.50	0.0020
				2253	0.3857	0.26		6	63.70	0.0024
				2306	0.6923	0.41	5- 5			
				2318	0.2000	0.45		16	79.70	0.0033
				2326	0.6000	0.53		30	112.00	0.0046
				2331	1.0799	0.62		42	141.60	0.0063
				2337	0.6000	0.68		54	181.10	0.0084
				2347	0.4200	0.75		106	236.80	0.0111
				2354	1.3714	0.91		124	291.70	0.0163
				2359	2.5202	1.12		142	337.60	0.0225
				2400	1.7988	1.15		200	365.50	0.0294
			5- 5	4	2.2500	1.30		218	411.70	0.0370
				10	1.2000	1.42		230	458.00	0.0427
				18	0.9750	1.55		242	491.00	0.0489
				32	0.1714	1.59		248	547.70	0.0523
				45	0.0	1.59		300	593.60	0.0598
				101	0.2250	1.65		306	635.30	0.0638
				114	0.1385	1.68		318	697.80	0.0725
				130	0.0375	1.69		330	727.20	0.0818
								336	765.40	0.0867
								348	823.40	0.0971
								400	867.50	0.1081
								418	945.40	0.1258
								430	979.70	0.1384
								448	1031.70	0.1581
								506	1073.30	0.1787
								548	1127.00	0.2289
								618	1129.70	0.2657
								648	1103.20	0.3021
								718	1048.50	0.3372
								748	949.90	0.3698
								800	906.90	0.3819
								818	851.80	0.3991

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00006522.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED 311 NEAR POCASSET		
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day
EVENT OF MAY 4 - 5, 1969 (CONTINUED)								
							5- 5	842
								770.20
								0.4203
								848
								718.20
								0.4251
								900
								690.10
								0.4343
								906
								654.20
								0.4387
								924
								604.60
								0.4510
								930
								549.40
								0.4548
								948
								516.80
								0.4652
								1000
								463.70
								0.4716
								1012
								423.30
								0.4774
								1030
								383.30
								0.4853
								1042
								353.20
								0.4901
								1100
								317.80
								0.4967
								1130
								269.40
								0.5063
								1154
								242.20
								0.5130
								1224
								210.20
								0.5204
								1300
								181.20
								0.5281
								1342
								153.00
								0.5357
								1430
								130.00
								0.5431
								1506
								113.90
								0.5479
								1554
								98.10
								0.5534
								1624
								84.20
								0.5564

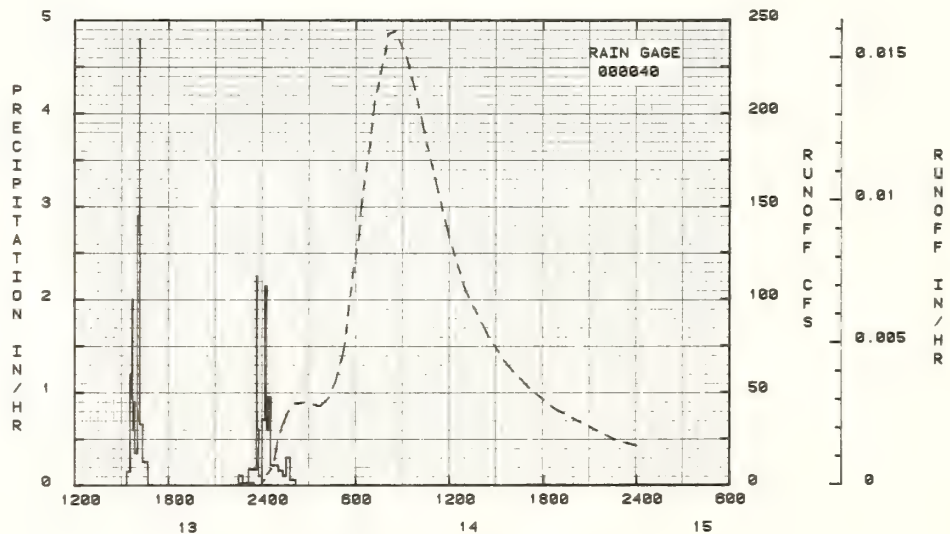
NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00006522.



EVENT OF MAY 4 - 5, 1969
CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 13 - 14, 1969										
6-13	RG 000040	0.001	6-13	RG 000040	0.0	0.0	6-13	2236	1.20	0.0
	0.0			1520	0.1500	0.04		2330	1.30	0.0001
				1541	1.2000	0.14		2400	1.50	0.0001
				1544	2.0000	0.24	6-14	12	3.20	0.0001
				1547	0.6000	0.27		18	5.80	0.0001
WATERSHED CONDITIONS: 36% of area in cultivation, alfalfa, sowed crops and row crops; the pasture of range land (64%) is mostly short grass on moderately steep slopes. About 10% is severely eroded.				1551	0.9000	0.33		36	8.90	0.0002
				1603	0.3500	0.40		48	14.20	0.0004
				1609	2.8998	0.69		100	23.40	0.0006
				1612	4.7997	0.93		118	32.10	0.0011
				1622	0.6600	1.04		142	40.20	0.0020
				1641	0.2526	1.12		206	44.00	0.0031
				2230	0.0	1.12		242	44.60	0.0048
				2247	0.1059	1.15		342	42.40	0.0076
				2308	0.0	1.15		418	47.20	0.0094
				2339	0.1742	1.24		442	55.90	0.0107
6-14				2343	2.2500	1.39		506	67.80	0.0123
				2348	0.6000	1.44		518	76.40	0.0132
				2400	0.1000	1.46		530	91.50	0.0143
				11	0.7091	1.59		548	111.90	0.0163
				18	2.1429	1.84		612	134.70	0.0195
				23	0.6000	1.89		624	153.60	0.0214
				35	0.9500	2.08		654	184.20	0.0269
				103	0.2143	2.18		712	206.40	0.0307
				122	0.1579	2.23		736	221.40	0.0363
				133	0.1091	2.25		806	242.60	0.0439
				149	0.3000	2.33		830	244.10	0.0503
				210	0.0571	2.35		918	228.80	0.0626
								948	212.90	0.0698
								1024	189.70	0.0777
								1118	157.30	0.0879
								1200	133.00	0.0945
								1300	105.50	0.1023
								1430	79.80	0.1114
								1542	64.70	0.1171
								1706	52.10	0.1224
							1848	40.60	0.1275	
							2236	24.30	0.1355	
							2400	21.10	0.1376	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.00006522.



EVENT OF JUNE 13 - 14, 1969
CHICKASHA, OKLAHOMA WATERSHED 311 NEAR POCASSET

CHICKASHA, OKLAHOMA WATERSHED C-1

LOCATION: Grady County, Oklahoma; SW 1/4 sec. 26, R. 7 W., T. 7 N., about 2 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 17.83 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													CHICKASHA, OKLAHOMA WATERSHED C-1	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P 0.67	2.28	2.29	1.50	5.38	2.25	0.81	2.49	4.17	1.47	0.22	1.01	24.54	
	Q 0.0	0.003	0.007	0.006	1.366	0.198	0.0	0.0	0.256	0.0	0.0	0.0	1.836	
STA AV	P 1.02	1.14	1.79	3.11	3.35	2.47	1.91	4.63	3.74	1.53	1.17	0.81	26.69	
	Q 0.0	0.001	0.008	0.052	0.273	0.168	0.068	0.586	0.153	0.078	0.180	0.0	1.566	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day	
	Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969	5- 6	0.054	5- 6	0.053	5- 6	0.103	5- 6	0.289	5- 6	0.527	5- 6	0.864	5- 6	0.950
														1.000
MAXIMUMS FOR PERIOD OF RECORD														
	4-12	0.081	8-28	0.065	8-28	0.128	8-28	0.349	8-28	0.614	8-28	0.920	8-28	1.049
	1967		1965		1965		1965		1965		1965		1965	1.153

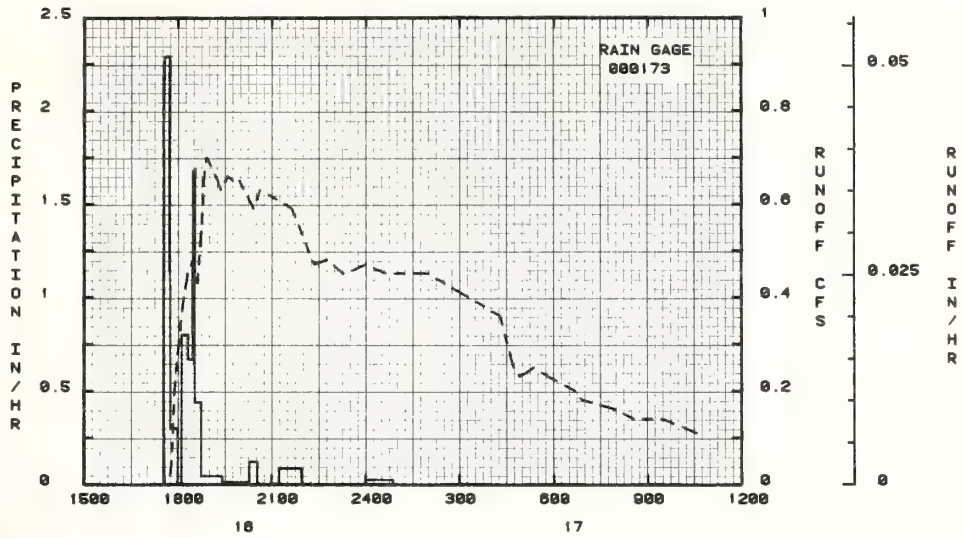
NOTES: Watershed conditions: Continuous cotton - tillage during fallow period consisted of shredding stalks, disking, chiseling, spring-tooth harrowing and spike-tooth harrowing. Cotton was planted during mid-June. Tillage during the growing season consisted of rotary hoeing and cultivating. Principal drain with less than 0.05 ft. grade per 100 feet was maintained during the growing season by use of field cultivator. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.30-1 and 69.30-3. Monthly precipitation values obtained from one recording rain gage, No. 173, located near the 1.5 ft. H-flume. Precipitation and runoff records began January 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED C-1	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.53	0.0	0.0	0.0	0.0	1.07	0.20	0.0	0.03	0.0		
3	0.0	0.0	0.02	0.0	0.38	0.0	0.0	0.0	0.75	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.79	0.0	0.0	0.13	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.09	0.0	0.30	0.0	0.0	0.0	0.0	0.10	0.0	0.48		
6	0.0	0.0	0.0	0.0	1.87	0.0	0.0	0.0	0.0	0.26	0.0	0.0		
7	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.08	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.05	0.58	0.0	0.0	0.0	0.0	0.34	0.0	0.0		
13	0.0	0.47	0.0	0.07	0.06	0.70	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.92	0.04	0.0	0.01	1.20	0.0	0.0	0.05	0.0	0.0	0.0		
15	0.02	0.01	0.02	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.88	1.10	0.0	0.0	1.60	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.62	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.01	0.0	0.06		
21	0.01	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.82	0.02	0.0	0.0		
22	0.0	0.0	0.43	0.0	0.0	0.0	0.0	0.43	0.67	0.07	0.0	0.0		
23	0.0	0.05	1.09	0.17	0.0	0.0	0.0	0.05	0.0	0.26	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.42	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.31	0.0	0.0	0.08	0.0	0.0	0.0	0.19	0.0		
27	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.10	0.0	0.11	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.25		
29	0.59		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.18		
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04		
31	0.05		0.0		0.0		0.0	0.0		0.0		0.0		
TOTAL	0.67	2.28	2.29	1.50	5.38	2.25	0.81	2.49	4.17	1.47	0.22	1.01		
STA AV	1.02	1.14	1.79	3.11	3.35	2.47	1.91	4.63	3.74	1.53	1.17	0.81		

NOTES: Values obtained from one recording rain gage, No. 173. STA AV based on 5 yr (1965-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED C-1							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 16 - 17, 1969										
RG 000173			RG 000173							
5-16	0.0	0.0	5-16	1735	0.0	0.0	5-16	1741	0.0	0.0
				1746	2.2909	0.42		1744	0.0	0.0
				1800	0.3000	0.49		1749	0.050	0.0001
				1808	0.0	0.49		1754	0.200	0.0007
				1820	0.8000	0.65		1801	0.290	0.0023
WATERSHED CONDITIONS:				1829	0.6667	0.75		1809	0.380	0.0048
100% cropland, continuous				1834	1.6798	0.89		1819	0.450	0.0086
dryland cotton. Field				1845	0.4364	0.97		1830	0.480	0.0134
freshly tilled, including				1926	0.0439	1.00		1838	0.430	0.0167
rotary hoeing and planting				2018	0.0115	1.01		1845	0.540	0.0199
cotton.										
30 Day Antecedent Conditions:				2033	0.1200	1.04		1850	0.650	0.0226
Rainfall Runoff				2115	0.0	1.04		1855	0.700	0.0258
Date	(inches)	(inches)		2158	0.0837	1.10		1917	0.650	0.0395
04-16	0.88	0.004		2400	0.0	1.10		1922	0.630	0.0425
04-17	0.00	0.002	5-17	52	0.0231	1.12		1936	0.660	0.0509
04-23	0.17	0.000								
04-26	0.31	0.000						1946	0.650	0.0569
04-27	0.02	0.000						1958	0.650	0.0641
05-03	0.38	0.000						2025	0.590	0.0797
05-04	0.79	0.000						2038	0.630	0.0870
05-05	0.30	0.000						2139	0.590	0.1216
05-06	1.87	0.320								
05-07	0.00	0.628						2221	0.470	0.1422
05-08	0.00	0.002						2245	0.480	0.1528
05-11	0.27	0.000						2317	0.450	0.1667
05-12	0.58	0.050						2400	0.470	0.1849
05-13	0.06	0.000					5-17	38	0.450	0.2011
05-14	0.01	0.000								
								200	0.450	0.2352
								300	0.410	0.2592
								417	0.360	0.2868
								443	0.250	0.2942
								455	0.230	0.2969
								522	0.250	0.3030
								549	0.230	0.3090
								640	0.200	0.3193
								654	0.180	0.3217
								757	0.160	0.3317
								832	0.140	0.3367
								927	0.140	0.3440
								949	0.130	0.3468
								1033	0.110	0.3545

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.05562.



EVENT OF MAY 16 - 17, 1969
CHICKASHA, OKLAHOMA WATERSHED C-1

CHICKASHA, OKLAHOMA WATERSHED C-2

LOCATION: Grady County, Oklahoma; SE 1/4, sec. 4, R. 8 W., T. 7 N., about 6 miles West and 4 miles North of Chickasha Oklahoma; Washita River Basin.

AREA: 32.54 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)															CHICKASHA, OKLAHOMA		WATERSHED C-2	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual				
1969	P	0.17	2.00	1.79	2.71	5.80	2.55	0.98	1.73	3.79	1.38	0.21	0.81	23.92				
	Q	0.0	0.0	0.0	0.039	0.728	0.078	0.0	0.0	0.0	0.0	0.0	0.0	0.845				
STA AV	P	0.75	1.08	1.44	2.86	3.32	3.25	1.65	2.87	3.52	1.35	1.86	0.79	24.73				
	Q	0.0	0.0	0.0	0.030	0.092	0.077	0.0	0.004	0.005	0.003	0.0	0.023	0.233				
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																		
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval										
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days		
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	
1969		5- 5	0.069	5- 5	0.064	5- 5	0.115	5- 5	0.225	5- 4	0.294	5- 6	0.375	5- 5	0.550	5- 3	0.728	
MAXIMUMS FOR PERIOD OF RECORD																		
		4-12	0.099	4-12	0.075	5- 5	0.115	5- 5	0.225	5- 4	0.294	5- 6	0.375	5- 5	0.550	5- 3	0.728	
		1967		1967		1969		1969		1969		1969		1969		1969		

NOTES: Watershed conditions: This 32.5 acre watershed continued in mixed cropping. The north 15.5 acres and 0.2 acre drainageway was planted to wheat in October 1968 and harvested in June 1969. This 15.5 acres were disked. The south 16.8 acres was planted to cotton in mid-June. A poor stand resulted and the 16.8 acres was drilled to grain sorghum July 2. The entire watershed was pastured until mid-August when the area was moldboard plowed. Entire watershed was planted to wheat September 30, 1969. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.31-1 and 69.31-3. Monthly precipitation values obtained from one weighting type rain gage, No. 174. Precipitation and runoff records began May 1, 1962. STA AV based on 8 yr (1962-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

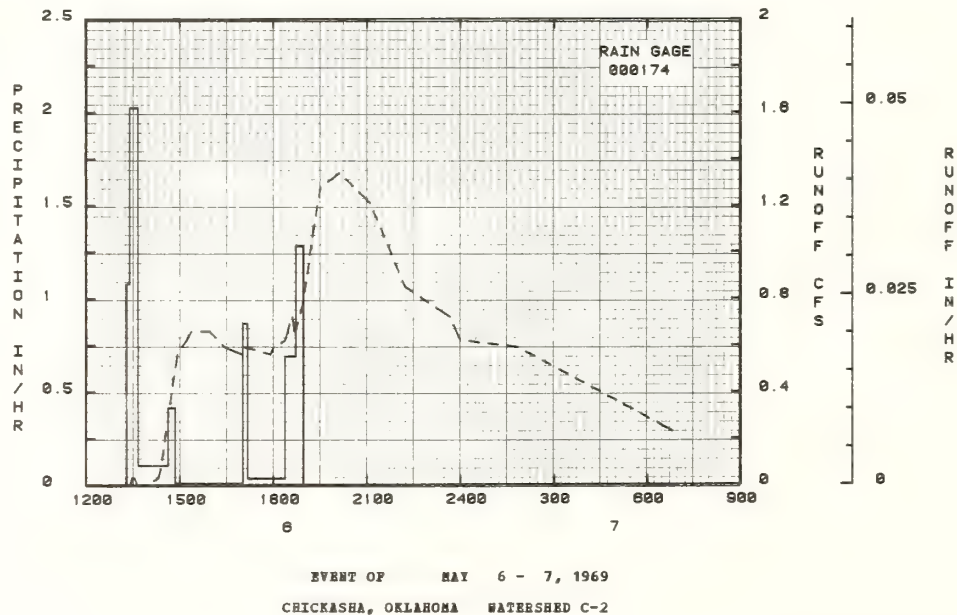
1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED C-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.49	0.0	0.0	0.0	0.0	0.61	0.25	0.0	0.01	0.0		
3	0.0	0.0	0.03	0.0	1.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	1.70	0.01	0.0	0.14	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.10	0.0	0.12	0.0	0.0	0.0	0.0	0.15	0.0	0.35		
6	0.0	0.0	0.0	0.0	1.66	0.0	0.0	0.0	0.0	0.20	0.0	0.06		
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.01	0.07	0.0	0.0		
12	0.0	0.0	0.0	0.03	0.37	0.0	0.0	0.0	0.0	0.29	0.0	0.0		
13	0.0	0.37	0.0	0.08	0.15	1.71	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.78	0.05	0.0	0.01	0.68	0.0	0.0	0.03	0.0	0.0	0.0		
15	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	1.15	0.05	0.0	0.0	0.0	1.73	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.02	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.50	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.02	0.0	0.05		
21	0.02	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.06	0.0	0.0		
22	0.0	0.0	0.26	0.0	0.0	0.0	0.12	0.15	0.99	0.04	0.0	0.0		
23	0.0	0.23	0.79	0.17	0.0	0.01	0.0	0.02	0.0	0.22	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.76	0.49	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	1.28	0.0	0.0	0.0	0.06	0.0	0.0	0.20	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.06	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13		
29	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.21		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01		
31	0.04	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.17	2.00	1.79	2.71	5.80	2.55	0.98	1.73	3.79	1.38	0.21	0.81		
STA AV	0.75	1.08	1.44	2.86	3.32	3.25	1.65	2.87	3.52	1.35	1.86	0.79		

NOTES: Values obtained from one weighting type rain gage, No. 174. STA AV based on 8 yr (1962-69) record period.

1969			SELECTED RUNOFF EVENT				CHICKASHA, OKLAHOMA				WATERSHED C-2			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.				
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)				
EVENT OF APRIL 26, 1969														
RG 000174			RG 000174											
4-26	0.0	0.0	4-26	1615	0.0	0.0	4-26	1621	0.0	0.0				
				1633	1.1667	0.35		1622	0.0	0.0				
				1642	3.8664	0.93		1623	0.0	0.0				
				1654	0.3500	1.00		1627	0.03	0.0				
				1718	0.1500	1.06		1630	0.0	0.0001				
WATERSHED CONDITIONS:														
100% cropland. Mixed														
crops. North 15.7 acres														
in fall sown wheat; the														
south 16.8 acres was														
freshly tilled.														
30 Day Antecedent Conditions:														
Date	Rainfall	Runoff												
(inches)	(inches)	(inches)												
04-12	0.03	0.000												
04-13	0.08	0.000												
04-16	1.15	0.001												
04-23	0.17	0.000												

1969 SELECTED RUNOFF EVENT				CHICKASHA, OKLAHOMA WATERSHED C-2						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6 - 7, 1969										
5- 6	RG 000174	0.0	5- 6	RG 000174			5- 6	1320	0.0	0.0
	0.0			1319	0.0	0.0		1321	0.0	0.0
				1324	1.0800	0.09		1325	0.0	0.0
				1340	2.0250	0.63		1329	0.03	0.0
				1438	0.1034	0.73		1333	0.03	0.0001
				1451	0.4154	0.82				
WATERSHED CONDITIONS:				1702	0.0092	0.84		1339	0.0	0.0002
100% cropland. Mixed				1711	0.8667	0.97		1345	0.0	0.0002
crops. North 15.7 acres				1823	0.0333	1.01		1354	0.0	0.0002
in fall sown wheat. The				1843	0.6900	1.24		1419	0.03	0.0004
south 16.8 acres was				1858	1.2800	1.56		1424	0.07	0.0005
freshly tilled.										
30 Day Antecedent Conditions:								1434	0.23	0.0012
Date	Rainfall	Runoff						1456	0.56	0.0056
(inches)	(inches)	(inches)						1523	0.66	0.0140
04-12	0.03	0.000						1557	0.66	0.0253
04-13	0.08	0.000						1628	0.59	0.0351
04-16	1.15	0.001								
04-23	0.17	0.000						1701	0.56	0.0447
04-26	1.28	0.037						1707	0.59	0.0465
04-27	0.00	0.001						1755	0.56	0.0605
05-03	1.46	0.035						1800	0.59	0.0620
05-04	1.70	0.009						1823	0.62	0.0691
05-05	0.12	0.309								
								1832	0.69	0.0721
								1837	0.72	0.0738
								1841	0.66	0.0752
								1843	0.66	0.0759
								1858	0.79	0.0814
								1919	1.12	0.0916
								1931	1.28	0.0989
								2007	1.34	0.1229
								2106	1.21	0.1612
								2213	0.85	0.1964
								2340	0.72	0.2312
								2400	0.62	0.2380
								150	0.59	0.2719
								648	0.23	0.3341

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.03048. For Isohyetal map, see p. 69-009-5 of this publication.



CHICKASHA, OKLAHOMA WATERSHED C-3

LOCATION: Grady County, Oklahoma; NE 1/4 sec. 35, R. 7 N., T. 7 N., about 2-1/2 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 44.26 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED C-3									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	0.69	2.16	2.22	1.39	5.09	1.98	0.73	2.29	4.14	1.60	0.23	1.05	23.57									
	Q	0.0	0.013	0.020	0.022	1.321	0.204	0.0	0.0	0.138	0.0	0.0	0.0	1.718									
STA AV	P	0.99	1.23	1.97	3.29	3.33	2.10	2.40	3.39	3.60	1.48	1.11	0.80	25.69									
	Q	0.013	0.008	0.063	0.513	0.398	0.475	0.427	0.728	0.300	0.090	0.118	0.0	3.134									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge				Maximum Volume for Selected Time Interval																	
		Date	Rate	1 Hour		2 Hours		6 Hours		12 Hours		1 Day		2 Days		8 Days							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.						
1969		5- 6	0.372	5- 6	0.310	5- 6	0.466	5- 6	0.641	5- 6	0.832	5- 6	0.834	5- 4	0.846	5- 4	0.881						
MAXIMUMS FOR PERIOD OF RECORD																							
		4-12	0.428	4-12	0.373	4-12	0.618	8-29	1.029	8-29	1.093	4-12	1.110	4-12	1.333	8-21	1.768						
		1967		1967		1967		1966		1966		1967		1967		1966							

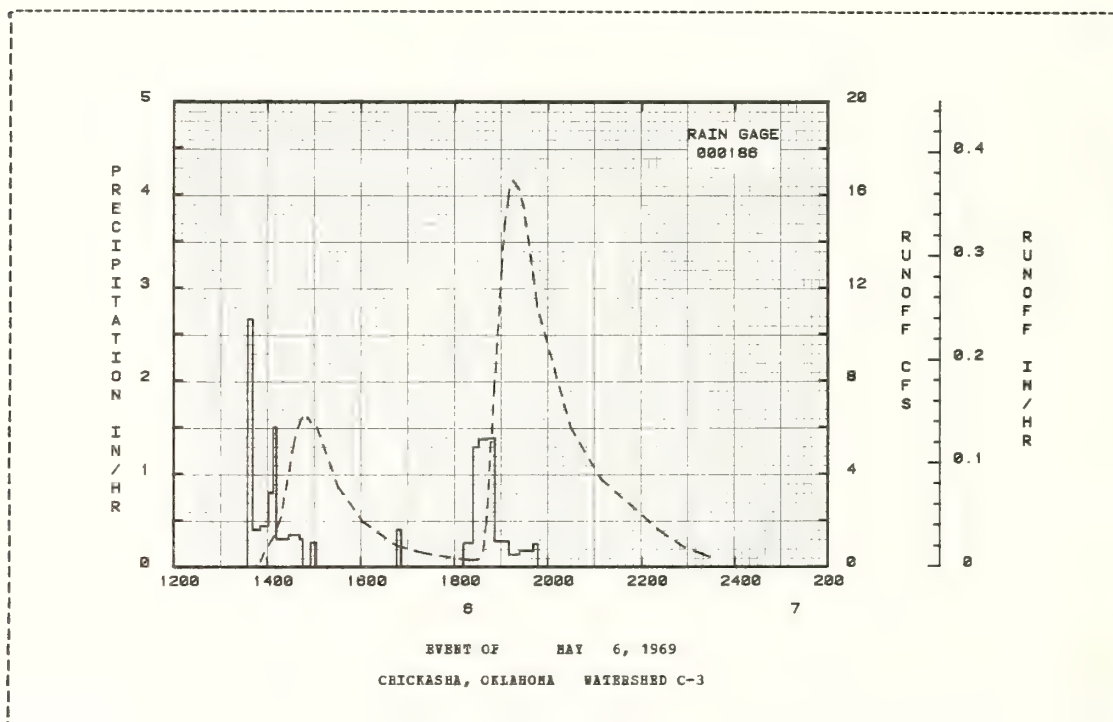
NOTES: Watershed conditions: Cropland, previously graded and smoothed for row irrigation. Entire watershed disked and moldboard plowed 10-12 inches deep in mid-December 1968. Spring preplanting tillage consisted of spring-tooth harrowing, incorporating fertilizer, incorporating herbicide, and spring-tooth harrowing. Cotton planted during last week of May. Tillage during growing season consisted of rotary hoeing and cultivating with sweep type cultivator as needed. Watershed area irrigated three times during July and August with a total application of approximately 6.75 inches of water. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.32-1 and 69.32-3. Monthly precipitation data obtained from two recording weighting type rain gages, No. 186 and Cotton Research Station gage. Precipitation and runoff records began September 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 SELECTED RUNOFF EVENT				CHICKASHA, OKLAHOMA				WATERSHED C-3			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF MAY 6, 1969											
RG 000186			RG 000186								
5- 6	0.0	0.0	5- 6	1335	0.0	0.0	5- 6	1343	0.0	0.0	
				1342	2.6571	0.31		1347	0.040	0.0	
				1351	0.4000	0.37		1352	0.220	0.0003	
				1402	0.4364	0.45		1356	0.580	0.0009	
				1408	0.8000	0.53		1409	1.340	0.0055	
WATERSHED CONDITIONS:				1412	1.5000	0.63		1418	2.140	0.0114	
100% cropland - land				1428	0.3000	0.71		1436	5.580	0.0373	
freshly tilled in				1442	0.3429	0.79		1440	5.980	0.0460	
preparation for				1446	0.3000	0.81		1445	6.430	0.0576	
planting cotton.				1456	0.0	0.81		1452	6.430	0.0744	
30 Day Antecedent Conditions:				1503	0.2571	0.84		1456	6.200	0.0838	
Date	Rainfall	Runoff		1646	0.0	0.84		1504	5.980	0.1020	
04-12	0.05	0.000		1652	0.4000	0.88		1531	3.440	0.1495	
04-13	0.07	0.000		1812	0.0	0.88		1603	1.920	0.1815	
04-16	0.81	0.022		1824	0.2500	0.93		1646	0.890	0.2041	
04-23	0.14	0.000									
04-26	0.30	0.000		1831	1.2857	1.08		1719	0.580	0.2131	
04-27	0.02	0.000		1842	1.3636	1.33		1819	0.270	0.2226	
05-03	0.30	0.000		1852	1.3801	1.56		1823	0.270	0.2230	
05-04	0.55	0.004		1910	0.2667	1.64		1831	0.310	0.2239	
05-05	0.51	0.017		1924	0.1286	1.67		1837	0.670	0.2250	
				1942	0.1667	1.72		1842	2.140	0.2276	
				1947	0.2400	1.74		1847	5.350	0.2346	
								1851	7.590	0.2443	
								1900	12.540	0.2781	
								1901	13.210	0.2829	
								1904	14.640	0.2985	
								1910	16.200	0.3330	
								1915	16.600	0.3637	
								1923	16.200	0.4127	
								1929	15.400	0.4481	
								1941	12.540	0.5106	
								1946	11.200	0.5329	
								2029	5.980	0.6708	
								2108	3.750	0.7417	
								2224	1.520	0.8164	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.02241. For Isohyetal map, see p. 69.9-5 this publication.

1969 SELECTED RUNOFF EVENT			CHICKASAW, OKLAHOMA				WATERSHED C-3			
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6, 1969 (CONTINUED)										
							5- 6	2256	0.800	0.8302
								2328	0.400	0.8374
								2400	0.0	0.8398

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.02241. For Isohyetal map, see p. 69.9-5 this publication.



CHICKASHA, OKLAHOMA WATERSHED C-4

LOCATION: Grady County, Oklahoma; NE 1/4, sec. 35, R. 7 W., T. 7 N., about 2-1/2 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 29.93 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)										CHICKASHA, OKLAHOMA WATERSHED C-4							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.67	2.21	2.31	1.46	5.22	1.91	0.72	2.26	4.12	1.60	0.21	1.09	23.78			
	Q	0.0	0.020	0.024	0.006	1.282	0.080	0.0	0.0	0.067	0.0	0.0	0.0	1.479			
STA AV	P	1.00	1.23	1.99	3.25	3.42	2.14	2.44	3.45	3.56	1.48	1.08	0.82	25.84			
	Q	0.004	0.007	0.040	0.282	0.333	0.311	0.403	0.542	0.169	0.042	0.118	0.0	2.251			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days					
								Date Vol.	Date Vol.	Date Vol.	Date Vol.	Date Vol.					
1969		5-16	0.385	5-16	0.324	5-16	0.484	5- 6	0.568	5- 6	0.674	5- 6	0.681	5- 5	0.690	5- 4	0.709
MAXIMUMS FOR PERIOD OF RECORD																	
		5-16	0.385	5-16	0.324	8-29	0.496	8-29	0.813	8-29	0.849	8-29	0.856	8-29	0.858	8-21	1.326
		1969		1969		1966		1966		1966		1966		1966		1966	

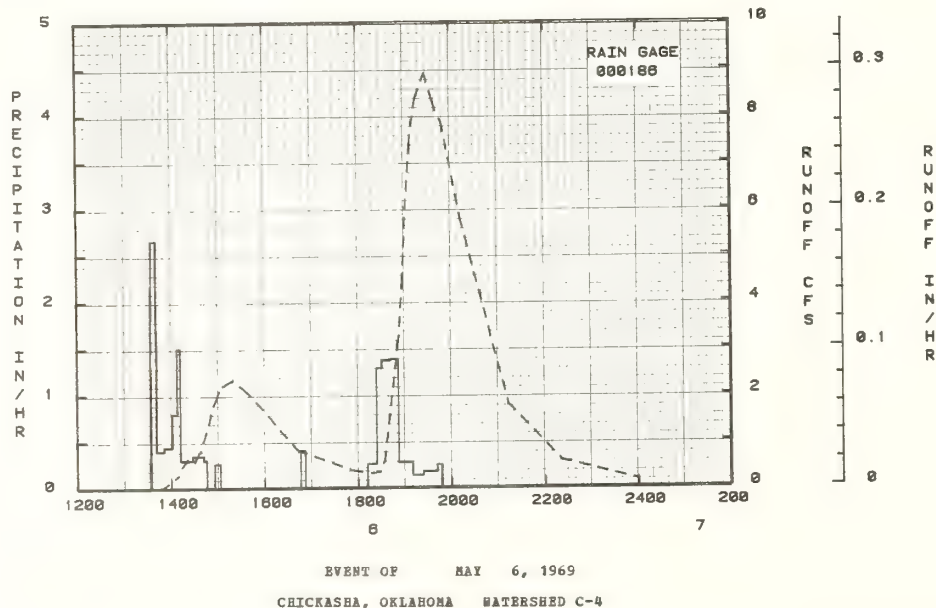
NOTES: Watershed conditions: Cropland, previously graded and smoothed for row irrigation. Approximately 50 percent of watershed was moldboard plowed 8-10 inches deep and the remainder was disked 4-6 inches in mid-December 1968. Spring preplanting tillage consisted of spring-tooth harrowing, incorporating fertilizer to a depth of 6-8 inches, incorporating herbicide with disk and spring-tooth harrow. Cotton was planted during latter part of May. Tillage during growing season consisted of rotary hoeing followed by cultivating with sweep type cultivator as needed. Watershed area irrigated three times during July and August with a total application of approximately 6.75 inches of water. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.33-1 and 69.33-3. Monthly precipitation data obtained from Thiessen weighted rainfall values from two recording weighting type rain gages, Nos. 186 and 187. Precipitation and runoff records began September 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED C-4	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.53	0.0	0.0	0.0	0.0	0.87	0.20	0.0	0.03	0.0		
3	0.0	0.0	0.02	0.0	0.33	0.0	0.0	0.0	0.93	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.81	0.0	0.0	0.12	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.09	0.0	0.29	0.0	0.0	0.0	0.0	0.25	0.0	0.0		
6	0.0	0.0	0.0	0.0	1.65	0.0	0.0	0.0	0.0	0.25	0.0	0.0		
7	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.08	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.05	0.46	0.0	0.0	0.0	0.0	0.35	0.0	0.0		
13	0.0	0.46	0.0	0.09	0.06	0.63	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.88	0.04	0.0	0.01	1.03	0.0	0.0	0.04	0.0	0.0	0.0		
15	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.82	1.35	0.0	0.0	0.0	1.46	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.60	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.02	0.0	0.06		
21	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.82	0.02	0.0	0.0		
22	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.41	0.59	0.07	0.0	0.0		
23	0.0	0.06	1.13	0.12	0.0	0.0	0.0	0.12	0.0	0.23	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.44	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.37	0.0	0.0	0.06	0.0	0.0	0.0	0.18	0.0		
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.07	0.0	0.11	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.25		
29	0.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.23		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04		
31	0.04	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.67	2.21	2.31	1.46	5.22	1.91	0.72	2.26	4.12	1.60	0.21	1.09		
STA AV	1.00	1.23	1.99	3.25	3.42	2.14	2.44	3.45	3.56	1.48	1.08	0.82		

NOTES: Precipitation values obtained from two weighting recording type rain gages, Nos. 186 and 187. STA AV based on 5 yr (1965-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED C-4							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6, 1969										
5- 6	RG 000186		5- 6	RG 000186			5- 6			
	0.0	0.0		1335	0.0	0.0		1343	0.0	0.0
				1342	2.6571	0.31		1346	0.0	0.0
				1351	0.4000	0.37		1349	0.0	0.0
				1402	0.4364	0.45		1356	0.090	0.0002
				1408	0.8000	0.53		1405	0.210	0.0009
WATERSHED CONDITIONS: 100% cropland - land freshly tilled in pre- paration for planting cotton.										
				1412	1.5000	0.63		1409	0.270	0.0015
				1428	0.3000	0.71		1415	0.480	0.0027
				1442	0.3429	0.79		1421	0.630	0.0046
				1446	0.3000	0.81		1430	0.570	0.0076
				1456	0.0	0.81		1438	0.810	0.0106
30 Day Antecedent Conditions:										
	Rainfall	Runoff								
Date	(inches)	(inches)								
04-12	0.05	0.000		1503	0.2571	0.84		1449	1.390	0.0173
				1646	0.0	0.84		1455	1.780	0.0226
04-13	0.08	0.000		1652	0.4000	0.88		1502	2.080	0.0300
04-16	0.82	0.005		1812	0.0	0.88		1507	2.200	0.0359
04-17	0.00	0.001		1824	0.2500	0.93		1520	2.320	0.0522
04-23	0.12	0.000		1831	1.2857	1.08		1542	1.990	0.0784
04-26	0.37	0.000		1842	1.3636	1.33		1642	0.810	0.1249
04-27	0.01	0.000		1852	1.3801	1.56		1753	0.360	0.1480
05-03	0.33	0.000		1910	0.2667	1.64		1817	0.300	0.1524
05-04	0.81	0.000		1924	0.1286	1.67		1828	0.330	0.1543
05-05	0.29	0.022								
				1942	0.1667	1.72		1834	0.570	0.1558
				1947	0.2400	1.74		1853	3.260	0.1759
								1858	4.590	0.1868
								1903	6.190	0.2016
								1909	7.570	0.2244
								1916	8.360	0.2552
								1928	8.900	0.3124
								1937	8.360	0.3553
								1942	8.090	0.3781
								1949	7.850	0.4089
								2013	5.760	0.4990
								2113	1.780	0.6240
								2221	0.570	0.6682
								2400	0.150	0.6880

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.03314. Antecedent precipitation amounts are from Thiessen weighted rainfall using rain gages 186 and 187. For Isohyetal map, see p. 69.9-5 of this publication.



CHICKASHA, OKLAHOMA WATERSHED C-5

LOCATION: Grady County, Oklahoma; SW 1/4, sec. 35, R. 7 N., T. 7 N., about 3 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 12.80 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED C-5	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.67	2.20	2.30	1.50	5.25	1.83	0.71	2.16	4.01	1.56	0.18	1.02	23.39	
	Q	0.0	0.0	0.012	0.0	0.611	0.089	0.0	0.0	0.004	0.0	0.0	0.0	0.716	
STA AV	P	0.99	1.20	1.95	3.17	3.29	2.17	2.09	4.39	3.49	1.45	1.05	0.80	26.04	
	Q	0.0	0.0	0.097	0.312	0.128	0.059	0.005	0.081	0.005	0.002	0.014	0.0	0.703	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		12 Hours		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	Date	Vol.	Date	Vol.	Date	Vol.
1969		5-16	0.136	5-16	0.122	5-16	0.198	5-16	0.270	5-6	0.310	5-6	0.320	5-6	0.321
MAXIMUMS FOR PERIOD OF RECORD															
		4-12	0.280	4-12	0.250	4-12	0.409	4-12	0.673	4-12	0.775	4-12	0.812	4-9	1.160
		1967		1967		1967		1967		1967		1967		1967	

NOTES: Watershed conditions: Watershed planted to wheat in fall of 1968 and harvested for grain in June 1969. There was a larger than usual amount of straw, therefore, stubble was burned June 20, 1969. Watershed area was disked June 22 to stop wind erosion. Disked watershed 4-6 inches deep on June 27, followed with land leveler to smooth surface. Chiseled 8-10 inches deep July 30, followed by disking 6-8 inches deep on August 4. Disked 4-6 inches followed by spring-tooth harrowing 4-6 inches deep on September 8. Spring-tooth harrowed 4-6 inches deep on September 29 followed with spike-tooth harrow on October 9. Planted wheat on October 14. For general description of map, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.34-1. Maps - revised composite, p. 69.7-21; topography, p. 69.34-3 of foregoing reference. Monthly precipitation data obtained from Thiessen weighted rainfall values from two weighting recording type rain gages, Numbers 185 and 187. Precipitation and runoff records began May 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)														CHICKASHA, OKLAHOMA WATERSHED C-5	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.81	0.21	0.0	0.02	0.0	0.0		
3	0.0	0.0	0.01	0.0	0.36	0.0	0.0	0.0	0.84	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.88	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.08	0.0	0.29	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.46		
6	0.0	0.0	0.0	0.0	1.56	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0		
7	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.04	0.45	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0		
13	0.0	0.46	0.0	0.10	0.06	0.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.87	0.04	0.0	0.01	0.98	0.0	0.0	0.02	0.0	0.0	0.0	0.0		
15	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.81	1.38	0.0	0.0	0.0	1.48	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.59	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.02	0.0	0.0	0.06		
21	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.82	0.02	0.0	0.0	0.0		
22	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.44	0.59	0.07	0.0	0.0	0.0		
23	0.0	0.06	1.13	0.16	0.0	0.0	0.0	0.10	0.0	0.23	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.41	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.38	0.0	0.0	0.09	0.0	0.0	0.0	0.16	0.0	0.0		
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.07	0.0	0.11	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.25	0.0		
29	0.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.21	0.0		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0		
31	0.04	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.67	2.20	2.30	1.50	5.25	1.83	0.71	2.16	4.01	1.56	0.18	1.02			
STA AV	0.99	1.20	1.95	3.17	3.29	2.17	2.09	4.39	3.49	1.45	1.05	0.80			

NOTES: Precipitation values obtained from two weighting recording type rain gages, Nos. 185 and 187. STA AV based on 5 yr (1965-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA			WATERSHED C-5				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MAY 6 - 7, 1969										
RG 000187			RG 000187							
5- 6	0.0	0.0	5- 6	1335	0.0	0.0	5- 6	1450	0.0	0.0
				1342	2.3143	0.27		1501	0.010	0.0001
				1352	0.2400	0.31		1507	0.010	0.0002
				1410	0.6333	0.50		1513	0.040	0.0004
				1444	0.3706	0.71		1527	0.100	0.0017
WATERSHED CONDITIONS:				1520	0.1000	0.77		1532	0.120	0.0024
100% cropland - planted				1643	0.0	0.77		1537	0.120	0.0031
to wheat fall of 1968.				1654	0.2182	0.81		1544	0.140	0.0043
30 Day Antecedent Conditions:				1811	0.0	0.81		1608	0.140	0.0087
Rainfall Runoff				1825	0.3000	0.88		1703	0.140	0.0188
Date	(inches)	(inches)								
04-12	0.04	0.000		1852	1.2445	1.44		1814	0.080	0.0288
04-13	0.10	0.000		1902	0.3600	1.50		1823	0.080	0.0297
04-16	0.81	0.000		1920	0.0333	1.51		1845	0.190	0.0336
04-23	0.16	0.000		1946	0.1385	1.57		1856	0.410	0.0379
04-26	0.38	0.000						1919	1.060	0.0597
04-27	0.01	0.000								
05-03	0.36	0.000						1932	1.380	0.0802
05-04	0.88	0.000						1943	1.450	0.1003
05-05	0.29	0.000						1949	1.520	0.1118
								2001	1.450	0.1348
								2119	0.640	0.2401
								2222	0.300	0.2784
								2252	0.190	0.2879
								2333	0.120	0.2961
								2400	0.080	0.2995
								5- 7	110	0.060
										0.3059

CHICKASHA, OKLAHOMA WATERSHED C-6

LOCATION: Grady County, Oklahoma; SW 1/4, sec. 35, R. 7 W., T. 7 N., about 3 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 13.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED C-6			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.67	2.19	2.29	1.50	5.23	1.82	0.71	2.15	3.99	1.56	0.88	1.01	23.30			
	Q	0.0	0.022	0.073	0.0	0.806	0.126	0.0	0.0	0.024	0.0	0.0	0.0	1.051			
STA AV	P	0.99	1.19	1.93	3.18	3.29	2.16	2.08	4.39	3.48	1.45	1.05	0.80	25.99			
	Q	0.0	0.017	0.174	0.290	0.166	0.082	0.007	0.174	0.022	0.016	0.045	0.0	0.992			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Date	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days					
								Date	Vol.	Date	Vol.	Date	Vol.				
1969		5-16	0.181	5-16	0.158	5-16	0.242	5- 6	0.346	5- 6	0.427	5- 6	0.436	5- 5	0.441	5- 5	0.462
MAXIMUMS FOR PERIOD OF RECORD																	
		8-28	0.305	4-12	0.259	4-12	0.398	4-12	0.634	4-12	0.744	4-12	0.787	4-12	0.895	4- 9	1.050
		1965		1967		1967		1967		1967		1967		1967		1967	

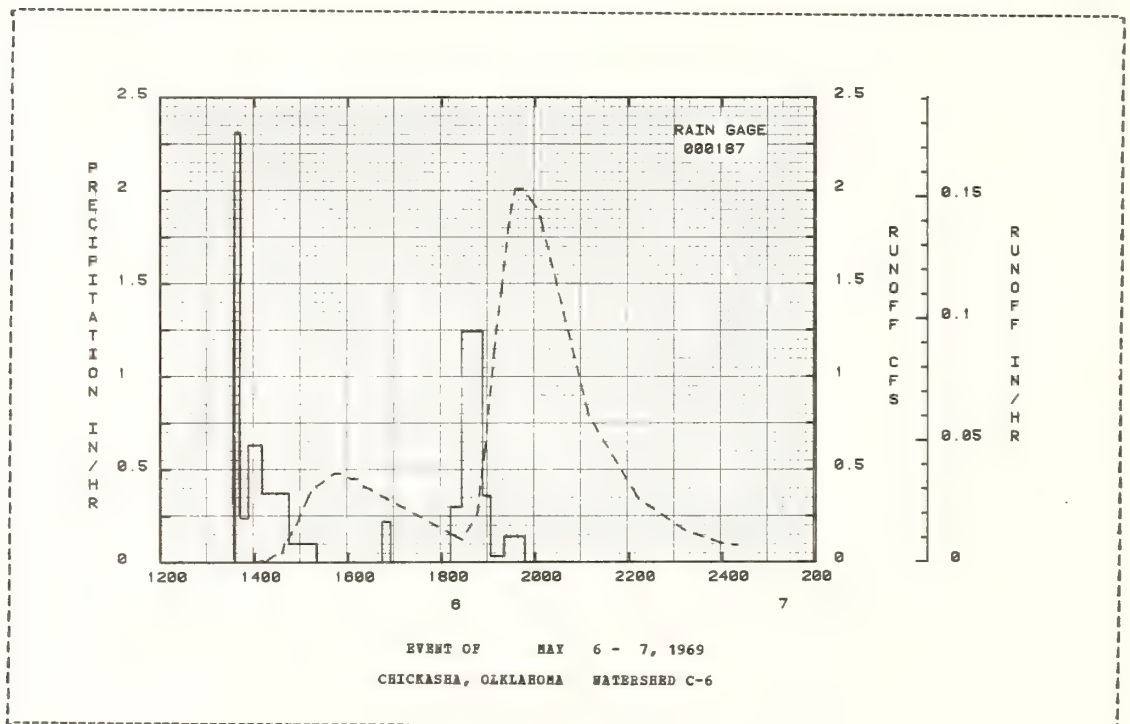
NOTES: Watershed conditions: Watershed planted to wheat in fall of 1968 and harvested for grain in June 20, 1968. Watershed area was disked June 22 to stop wind erosion. Disked watershed 4-6 inches deep on June 27, followed with land leveler to smooth surface. Chiseled 8-10 inches deep July 30, followed by disking 6-8 inches deep on August 4. Disked 4-6 inches followed by spring-tooth harrowing 4-6 inches deep on September 8. Spring-tooth harrowed 4-6 inches deep on September 29 followed with spike-tooth harrow on October 9. Planted wheat on October 14. For general description of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.35-1. Maps - revised composite, p. 69.7-21; topography, p. 69.34-3 of foregoing reference. Monthly precipitation data obtained from Thiessen weighted rainfall values from two weighting recording type rain gages, Numbers 185 and 187. Precipitation and runoff records began May 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969	DAILY PRECIPITATION (inches)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.80	0.21	0.0	0.02	0.0
3	0.0	0.0	0.01	0.0	0.36	0.0	0.0	0.0	0.83	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.89	0.0	0.0	0.11	0.0	0.0	0.0	0.0
5	0.0	0.0	0.08	0.0	0.29	0.0	0.0	0.0	0.0	0.23	0.0	0.45
6	0.0	0.0	0.0	0.0	1.55	0.0	0.0	0.0	0.0	0.25	0.0	0.0
7	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.04	0.0	0.0	0.0
12	0.0	0.0	0.0	0.04	0.44	0.0	0.0	0.0	0.0	0.35	0.0	0.0
13	0.0	0.46	0.0	0.10	0.06	0.62	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.87	0.04	0.0	0.01	0.98	0.0	0.0	0.02	0.0	0.0	0.0
15	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.80	1.37	0.0	0.0	0.0	1.48	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.58	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.02	0.0	0.06
21	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.82	0.02	0.0	0.0
22	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.44	0.59	0.07	0.0	0.0
23	0.0	0.06	1.12	0.17	0.0	0.0	0.0	0.10	0.0	0.23	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.41	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.38	0.0	0.0	0.09	0.0	0.0	0.0	0.16	0.0
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.07	0.0	0.11	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.25
29	0.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.21
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04
31	0.04	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.67	2.19	2.29	1.50	5.23	1.82	0.71	2.15	3.99	1.56	0.18	1.01
STA AV	0.99	1.19	1.93	3.18	3.29	2.16	2.08	4.39	3.48	1.45	1.05	0.80

NOTES: Precipitation values obtained from two weighting recording type rain gages, Nos. 185 and 187. STA AV based 5 yr (1965-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED C-6						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF MAY 6 - 7, 1969									
RG 000187			RG 000187						
5- 6	0.0	0.0	5- 6	1335	0.0	0.0	5- 6	1359	0.0
				1342	2.3143	0.27		1411	0.010
				1352	0.2400	0.31		1415	0.010
				1410	0.6333	0.50		1426	0.040
				1444	0.3706	0.71		1435	0.050
WATERSHED CONDITIONS:				1520	0.1000	0.77		1438	0.100
100% cropland - planted				1643	0.0	0.77		1442	0.120
to wheat fall of 1968.				1654	0.2182	0.81		1454	0.210
30 Day Antecedent Conditions:				1811	0.0	0.81		1459	0.260
	Rainfall	Runoff		1825	0.3000	0.88		1512	0.380
Date	(inches)	(inches)							
04-12	0.04	0.000		1852	1.2445	1.44		1519	0.410
04-13	0.10	0.000		1902	0.3600	1.50		1542	0.480
04-16	0.80	0.000		1920	0.0333	1.51		1550	0.480
04-23	0.17	0.000		1946	0.1385	1.57		1603	0.450
04-26	0.38	0.000						1612	0.450
04-27	0.01	0.000						1620	0.410
05-03	0.36	0.000						1826	0.120
05-04	0.89	0.000						1845	0.260
05-05	0.28	0.013						1855	0.600
								1908	1.180
								1918	1.520
								1926	1.830
								1934	2.010
								1944	2.010
								2001	1.910
								2008	1.830
								2108	0.790
								2212	0.340
								2312	0.170
								2400	0.100
								5- 7	19
									0.090
									0.4310

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.07629. Antecedent precipitation amounts are from Thiessen weighted rainfall using rain gages 185 and 187. For Isohyetal map, see p. 69.9-5 of this publication.



CHICKASHA, OKLAHOMA WATERSHED C-7

LOCATION: Grady County, Oklahoma; SW 1/4, sec. 35, R. 7 W., T. 7 N., about 3 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 26.52 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)							CHICKASHA, OKLAHOMA WATERSHED C-7										
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.68	2.17	2.26	1.50	5.19	1.80	0.72	2.13	3.95	1.53	0.18	1.00	23.11			
	Q	0.0	0.022	0.045	0.005	0.820	0.072	0.0	0.0	0.034	0.0	0.0	0.0	0.978			
STA AV	P	0.99	1.17	1.90	3.15	3.26	2.16	2.07	4.36	3.46	1.43	1.05	0.79	25.81			
	Q	0.0	0.020	0.019	0.491	0.176	0.253	0.179	0.517	0.124	0.098	0.049	0.0	1.926			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				2 Days		8 Days			
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.		
1969		5-16	0.286	5-16	0.227	5-16	0.313	5-16	0.392	5-16	0.408	5-16	0.410	5-16	0.410	5-12	0.413
MAXIMUMS FOR PERIOD OF RECORD																	
		4-12	0.957	4-12	0.637	4-12	0.824	4-12	0.944	4-12	0.969	4-12	1.050	4-10	1.228	4- 9	1.634
		1967		1967		1967		1967		1967		1960		1967		1967	

NOTES: Watershed conditions: Cropland, north portion of watershed was planted to alfalfa in fall of 1968. South portion of watershed was planted to grain and forage sorghum. South portion of watershed was moldboard plowed 10 inches deep on October 28. For description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.36-1 and 69.36-3. Monthly precipitation data from Thiessen weighted rainfall value from two recording weighting type rain gages, Numbers 185 and 187. Precipitation and runoff records began May 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED C-7	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.53	0.0	0.0	0.0	0.0	0.78	0.21	0.0	0.01	0.0		
3	0.0	0.0	0.02	0.0	0.37	0.0	0.0	0.0	0.80	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.89	0.0	0.0	0.11	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.08	0.0	0.28	0.0	0.0	0.0	0.0	0.22	0.0	0.44		
6	0.0	0.0	0.0	0.0	1.55	0.0	0.0	0.0	0.0	0.26	0.0	0.0		
7	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.03	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.03	0.44	0.0	0.0	0.0	0.0	0.34	0.0	0.0		
13	0.0	0.46	0.0	0.11	0.06	0.61	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.85	0.03	0.0	0.01	0.97	0.0	0.0	0.02	0.0	0.0	0.0		
15	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.79	1.34	0.0	0.0	0.0	1.49	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.58	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.01	0.0	0.05		
21	0.01	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.81	0.02	0.0	0.0		
22	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.44	0.59	0.08	0.0	0.0		
23	0.0	0.07	1.11	0.19	0.0	0.0	0.0	0.11	0.0	0.23	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.40	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.37	0.0	0.0	0.11	0.0	0.0	0.0	0.17	0.0		
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.07	0.0	0.10	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.25		
29	0.62		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.22		
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04		
31	0.04		0.0		0.0		0.0	0.0		0.0		0.0		
TOTAL	0.68	2.17	2.26	1.50	5.19	1.80	0.72	2.13	3.95	1.53	0.18	1.00		
STA AV	0.99	1.17	1.90	3.15	3.26	2.16	2.07	4.36	3.46	1.43	1.05	0.79		

NOTES: Precipitation values obtained from two recording weighting type rain gages, Nos. 185 and 187. STA AV based 5 yr (1965-69) record period.

CHICKASHA, OKLAHOMA WATERSHED C-8

LOCATION: Grady County, Oklahoma; SW 1/4, sec. 35, R. 7 W., T. 7 N., about 3-1/2 miles Southeast of Chickasha, Oklahoma; Washita River Basin.

AREA: 27.28 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA				WATERSHED C-8			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual							
1969	P	0.71	2.18	2.28	1.53	5.32	1.77	0.73	2.08	3.93	1.54	0.20	1.00	23.27							
	Q	0.0	0.0	0.0	0.0	0.161	0.001	0.0	0.0	0.002	0.0	0.0	0.0	0.164							
STA AV	P	0.99	1.21	1.93	2.87	3.36	2.16	2.11	4.30	3.43	1.44	1.05	0.80	25.64							
	Q	0.0	0.0	0.016	0.108	0.035	0.018	0.094	0.261	0.155	0.001	0.0	0.0	0.687							
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																					
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days									
								Date	Vol.	Date	Vol.	Date	Vol.								
1969		5-16	0.023	5-16	0.021	5-16	0.039	5-16	0.076	5- 6	0.081	5- 6	0.081	5- 6	0.081						
MAXIMUMS FOR PERIOD OF RECORD																					
		9-19	0.257	9-19	0.190	9-19	0.249	8-29	0.374	8-29	0.430	8-29	0.436	9-19	0.610	8-21	0.678				
		1965		1965		1965		1966		1966		1966		1965		1966					

NOTES: Watershed conditions: Cropland, watershed was drilled to alfalfa in fall of 1965. Because the three previous years were below normal in rainfall, the stand of alfalfa had deteriorated to the extent that the field was not harvested. Area was spring-tooth harrowed, disked, cultivated with sweep type cultivator, chiseled, and harrowed during summer of 1969. Entire watershed was planted to wheat in mid-October 1969. For general map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 69.37-1. Maps - revised composite, p. 69.7-21; topography, p. 69.37-5 of foregoing reference. Monthly precipitation obtained from Thiessen weighted rainfall values from two recording weighting type rain gages, numbers 185 and 188. Precipitation and runoff records began April 1, 1965. STA AV based on 5 yr (1965-69) record period. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969	DAILY PRECIPITATION (inches)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.54	0.0	0.0	0.0	0.0	0.71	0.22	0.0	0.02	0.0
3	0.0	0.0	0.02	0.0	0.36	0.0	0.0	0.0	0.82	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.90	0.0	0.0	0.13	0.0	0.0	0.0	0.0
5	0.0	0.0	0.08	0.0	0.30	0.0	0.0	0.0	0.0	0.24	0.0	0.47
6	0.0	0.0	0.0	0.0	1.55	0.0	0.0	0.0	0.0	0.26	0.0	0.0
7	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.01	0.0	0.0	0.0
12	0.0	0.0	0.0	0.04	0.41	0.0	0.0	0.0	0.0	0.31	0.0	0.0
13	0.0	0.46	0.0	0.11	0.06	0.61	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.86	0.04	0.0	0.01	0.96	0.0	0.0	0.01	0.0	0.0	0.0
15	0.01	0.0	0.03	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.78	1.49	0.0	0.0	0.0	1.48	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.57	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.01	0.0	0.05
21	0.01	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.81	0.02	0.0	0.0
22	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.40	0.58	0.08	0.0	0.0
23	0.0	0.07	1.11	0.23	0.0	0.0	0.0	0.14	0.0	0.23	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.41	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.36	0.0	0.0	0.14	0.0	0.0	0.0	0.18	0.0
27	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.07	0.0	0.11	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.25
29	0.65		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.20
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03
31	0.04		0.0		0.0		0.0	0.0		0.0		0.0
TOTAL	0.71	2.18	2.28	1.53	5.32	1.77	0.73	2.08	3.93	1.54	0.20	1.00
STA AV	0.99	1.21	1.93	2.87	3.36	2.16	2.11	4.30	3.43	1.44	1.05	0.80

NOTES: Precipitation values obtained from two recording weighting type rain gages, Nos. 185 and 188. STA AV based 5 yr (1965-69) record period.

CHICKASHA, OKLAHOMA WATERSHED R-1

LOCATION: Caddo County, Oklahoma; NE 1/4, sec. 21, T. 8 N., R. 9 W., about 4-3/4 miles North and 3-1/4 miles West of Verden, Oklahoma; Washita River Basin.

AREA: 17.76 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)							CHICKASEA, OKLAHOMA WATERSHED R-1							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.18	2.04	2.37	2.63	5.95	4.54	1.21	3.30	4.78	2.20	0.18	0.83	30.21
	Q	0.0	0.0	0.000	0.005	0.026	0.043	0.0	0.000	0.004	0.000	0.0	0.0	0.079
STA AV	P	0.66	1.06	1.41	3.35	3.29	4.27	1.46	3.40	4.05	1.62	1.90	0.84	27.30
	Q	0.0	0.0	0.000	0.020	0.010	0.010	0.0	0.005	0.006	0.001	0.003	0.0	0.053

NOTES: Watershed conditions: Watershed is in range and pasture grasses and within the same fence enclosure as Watersheds R-2, R-3 and R-4. All have essentially the same grazing management. There is a good hydrologic cover of weeds, annual grasses, low order perennial grasses and some climax grass species, however, the range condition class is poor. The watershed was slightly overgrazed during the year. For description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.38-1 and 69.38-2. Precipitation data obtained from recording rain gage No. 189. Precipitation records began Jan. 1, 1962. Runoff records began July 1, 1962. STA AV based on 8 yr (1962-69) record period. Runoff measured by stage-volume change in a farm pond. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)							CHICKASHA, OKLAHOMA WATERSHED R-1						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.60	0.0	0.0	0.0	0.0	1.22	0.98	0.0	0.05	0.0	0.0
3	0.0	0.0	0.03	0.0	0.75	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	2.84	0.01	0.0	0.34	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.14	0.0	0.12	0.0	0.0	0.0	0.0	0.18	0.0	0.42	
6	0.0	0.0	0.0	0.0	1.33	0.0	0.0	0.0	0.0	0.42	0.0	0.02	
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.27	0.0	0.0	0.0	0.0	0.25	0.0	0.0	
12	0.0	0.0	0.0	0.02	0.28	0.0	0.0	0.0	0.0	0.64	0.0	0.0	
13	0.0	0.42	0.0	0.08	0.19	2.16	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.95	0.20	0.0	0.01	0.47	0.0	0.0	0.07	0.0	0.0	0.0	
15	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	1.24	0.01	0.0	0.0	0.0	2.34	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	
21	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.82	0.07	0.0	0.0	
22	0.0	0.0	0.29	0.0	0.0	0.0	0.15	0.68	0.56	0.01	0.0	0.0	
23	0.0	0.10	1.03	0.16	0.0	0.16	0.0	0.0	0.0	0.17	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.07	1.60	0.79	0.74	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	1.13	0.0	0.0	0.27	0.0	0.0	0.0	0.13	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	
29	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.21	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.04	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.18	2.04	2.37	2.63	5.95	4.54	1.21	3.30	4.78	2.20	0.18	0.83	
STA AV	0.66	1.06	1.41	3.35	3.29	4.27	1.46	3.40	4.05	1.62	1.90	0.84	

NOTES: Precipitation values obtained from one recording rain gage, No. 189. STA AV based on 8 yr (1962-69) record period.

CHICKASHA, OKLAHOMA WATERSHED R-2

LOCATION: Caddo County, Oklahoma; NW 1/4, sec. 22, T. 8 N., R. 9 W., about 4-1/2 miles North and 2-3/4 miles West of Verden, Oklahoma; Washita River Basin.

AREA: 24.08 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED R-2	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.16	2.01	2.18	2.50	5.69	4.22	1.23	3.00	4.55	2.07	0.16	0.79	28.56	
	Q	0.0	0.002	0.002	0.047	0.122	0.123	0.002	0.011	0.019	0.004	0.0	0.0	0.333	
STA AV	P	0.61	1.01	1.31	3.28	3.23	4.20	1.42	3.29	3.94	1.58	1.83	0.81	26.51	
	Q	0.001	0.000	0.002	0.062	0.029	0.042	0.001	0.035	0.036	0.008	0.011	0.004	0.232	

NOTES: Watershed conditions: Watershed is in range and pasture grasses and within the same fence enclosure as Watersheds R-1, R-3 and R-4. All have essentially the same grazing management. There is a good hydrologic cover of weeds, annual grasses, low order perennial grasses and some climax grass species, however, the range condition class is poor. The watershed was slightly overgrazed during the year. For description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.39-1 and 69.39-2. Precipitation data obtained from recording rain gage No. 190. Precipitation records began Jan. 1, 1962. Runoff records began July 1, 1962. STA AV based on 8 yr (1962-69) record period. Runoff measured by stage-volume change in a farm pond. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969 DAILY PRECIPITATION (inches)														CHICKASHA, OKLAHOMA WATERSHED R-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.55	0.0	0.0	0.0	0.0	1.15	0.95	0.0	0.05	0.0	0.0		
3	0.0	0.0	0.02	0.0	0.75	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	2.70	0.01	0.0	0.30	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.14	0.0	0.15	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.40		
6	0.0	0.0	0.0	0.0	1.18	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.04		
7	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.02	0.28	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0		
13	0.0	0.42	0.0	0.07	0.19	2.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.89	0.17	0.0	0.01	0.41	0.0	0.0	0.06	0.0	0.0	0.0	0.0		
15	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	1.13	0.02	0.0	0.0	0.0	2.14	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.01	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07		
21	0.01	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.79	0.05	0.0	0.0	0.0		
22	0.0	0.0	0.27	0.0	0.0	0.0	0.14	0.55	0.60	0.01	0.0	0.0	0.0		
23	0.0	0.14	0.96	0.15	0.0	0.11	0.0	0.0	0.0	0.18	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.08	1.43	0.77	0.75	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	1.13	0.0	0.0	0.32	0.0	0.0	0.0	0.11	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09		
29	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.0	0.0	0.15		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.04	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL		0.16	2.01	2.18	2.50	5.69	4.22	1.23	3.00	4.55	2.07	0.16	0.79		
STA AV		0.61	1.01	1.31	3.28	3.23	4.20	1.42	3.29	3.94	1.58	1.83	0.81		

NOTES: Precipitation values obtained from one recording rain gage, No. 190. STA AV based on 8 yr (1962-69) record period.

CHICKASHA, OKLAHOMA WATERSHED R-3

LOCATION: Caddo County, Oklahoma; NE 1/4, Sec/ 21. T. 8 N., R. 9 W., about 4-1/2 miles North and 3-1/4 miles West of Verden, Oklahoma; Washita River Basin.

AREA: 25.84 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)						CHICKASHA, OKLAHOMA WATERSHED R-3								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.14	1.99	2.21	2.41	5.26	4.22	1.19	2.88	4.29	2.02	0.14	0.75	27.50
	Q	0.0	0.0	0.0	0.007	0.033	0.030	0.0	0.0	0.008	0.000	0.0	0.0	0.079
STA AV	P	0.60	1.01	1.32	3.25	3.17	4.16	1.41	3.26	3.84	1.56	1.81	0.79	26.17
	Q	0.0	0.0	0.001	0.026	0.010	0.015	0.0	0.015	0.018	0.004	0.005	0.001	0.093

NOTES: Watershed conditions: Watershed is in range and pasture grasses and within the same fence enclosure as Watersheds R-1, R-2 and R-4. All have essentially the same grazing management. There is a good hydrologic cover of weeds, annual grasses, low order perennial grasses and some climax grass species, however, the range condition class is poor. The watershed was slightly overgrazed during the year. For description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.40-1 and 69.39-2. Precipitation data obtained from recording rain gage No. 191. Precipitation records began Jan. 1, 1962. Runoff records began July 1, 1962. STA AV based on 8 yr (1962-69) record period. Runoff measured by stage-volume change in a farm pond. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969		DAILY PRECIPITATION (inches)					CHICKASHA, OKLAHOMA WATERSHED R-3							
Day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.56	0.0	0.0	0.0	0.0	1.04	0.79	0.0	0.04	0.0	
3	0.0	0.0	0.0	0.04	0.0	0.68	0.0	0.0	0.0	0.01	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	2.57	0.01	0.0	0.26	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.14	0.0	0.14	0.0	0.0	0.0	0.0	0.16	0.0	0.37	
6	0.0	0.0	0.0	0.0	0.0	1.06	0.0	0.0	0.0	0.0	0.35	0.0	0.02	
7	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.23	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.02	0.28	0.0	0.0	0.0	0.0	0.57	0.0	0.0	
13	0.0	0.42	0.0	0.08	0.16	2.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.89	0.18	0.0	0.01	0.41	0.0	0.0	0.07	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	1.00	0.01	0.0	0.0	0.0	2.10	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.01	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	
21	0.01	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.05	0.0	0.0	
22	0.0	0.0	0.26	0.0	0.0	0.0	0.0	0.11	0.64	0.55	0.02	0.0	0.0	
23	0.0	0.12	0.95	0.18	0.0	0.0	0.11	0.0	0.0	0.0	0.17	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.07	1.52	0.76	0.71	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.0	1.13	0.0	0.0	0.32	0.0	0.0	0.0	0.10	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	
29	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.19	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.03	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL		0.14	1.99	2.21	2.41	5.26	4.22	1.19	2.88	4.29	2.02	0.14	0.75	
STA AV		0.60	1.01	1.32	3.25	3.17	4.16	1.41	3.26	3.84	1.56	1.81	0.79	

NOTES: Precipitation values obtained from one recording rain gage No. 191. STA AV based on 8 yr (1962-69) record period.

CHICKASHA, OKLAHOMA WATERSHED R-4

LOCATION: Caddo County, Oklahoma; NW 1/4, sec. 22, T. 8 N. R. 9 W., about 4-1/2 miles North and 2-1/2 miles West of Verden, Oklahoma; Washita River Basin.

AREA: 18.12 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)							CHICKASHA, OKLAHOMA WATERSHED R-4						
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969 P	0.18	1.74	1.95	2.87	5.93	4.85	1.28	2.93	5.12	2.13	0.14	0.66	29.78
Q	0.0	0.0	0.0	0.008	0.073	0.057	0.0	0.0	0.003	0.0	0.0	0.0	0.141
STA AV P	0.65	0.96	1.29	3.36	3.31	4.33	1.40	3.34	4.00	1.66	1.86	0.80	26.96
Q	0.0	0.0	0.0	0.079	0.015	0.027	0.0	0.024	0.020	0.004	0.004	0.0	0.173

NOTES: Watershed conditions: Watershed is in range and pasture grasses and within the same fence enclosure as Watersheds R-1, R-2 and R-3. All have essentially the same grazing management. There is a good hydrologic cover of weeds, annual grasses, low order perennial grasses, and some climax grass species, however, the range condition class is poor. The watershed was slightly overgrazed during the year. For description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, pp. 69.41-1 and 69.41-2. Precipitation data obtained from recording rain gage No. 192. Precipitation records began Jan. 1, 1962. Runoff records began July 1, 1962. STA AV based on 8 yr (1962-69) record period. Runoff measured by stage-volume change in a farm pond. For long-time precipitation records, see U.S. Weather Bureau records at Chickasha, Okla.

1969	DAILY PRECIPITATION (inches)						CHICKASHA, OKLAHOMA WATERSHED R-4						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.44	0.0	0.0	0.0	0.0	1.25	1.12	0.0	0.04	0.0	0.0
3	0.0	0.0	0.01	0.0	0.70	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	2.58	0.01	0.0	0.26	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.12	0.0	0.24	0.0	0.0	0.0	0.0	0.20	0.0	0.33	
6	0.0	0.0	0.0	0.0	1.35	0.0	0.0	0.0	0.0	0.32	0.0	0.02	
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.20	0.0	0.0	
12	0.0	0.0	0.0	0.02	0.34	0.0	0.0	0.0	0.0	0.63	0.0	0.0	
13	0.0	0.35	0.0	0.08	0.23	2.52	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.76	0.12	0.0	0.02	0.51	0.0	0.0	0.07	0.0	0.0	0.0	
15	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	1.24	0.02	0.0	0.0	0.0	2.33	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.02	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.07	
21	0.01	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.84	0.06	0.0	0.0	
22	0.0	0.0	0.24	0.0	0.0	0.0	0.15	0.46	0.75	0.04	0.0	0.0	
23	0.0	0.11	0.96	0.15	0.0	0.08	0.0	0.0	0.0	0.17	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.09	1.54	0.78	0.65	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	1.38	0.0	0.0	0.35	0.0	0.0	0.0	0.10	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	
29	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.15	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
31	0.04	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.18	1.74	1.95	2.87	5.93	4.85	1.28	2.93	5.12	2.13	0.14	0.66	
STA AV	0.65	0.96	1.29	3.36	3.31	4.33	1.40	3.34	4.00	1.66	1.86	0.80	

NOTES: Precipitation values obtained from one recording rain gage, No. 192. STA AV based on 8 yr (1962-69) record period.

CHICKASHA, OKLAHOMA WATERSHED R-5

LOCATION: Grady County, Oklahoma; SW 1/4, sec. 12, T. 7 N., R. 6 W., about 8 miles east and 3 miles north of Chickasha, Oklahoma; Washita River Basin.

AREA: 23.72 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)															CHICKASHA, OKLAHOMA WATERSHED R-5																				
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																					
1969	P	0.70	2.53	2.08	1.03	4.86	3.98	3.97	2.54	3.62	1.71	0.39	1.58	28.99																					
	Q	0.0	0.154	0.058	0.0	0.595	0.415	0.169	0.0	0.0	0.0	0.0	0.0	1.391																					
STA AV	P	1.17	1.24	2.05	3.36	4.55	2.79	3.30	2.74	3.64	1.78	1.48	1.06	29.14																					
	Q	0.0	0.051	0.077	0.358	0.225	0.154	0.081	0.0	0.003	0.0	0.006	0.0	1.090																					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																																			
		Maximum Discharge				1 Hour				2 Hours				Maximum Volume for Selected Time Interval								2 Days				8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.						
1969		5- 6	0.705	5- 6	0.418	5- 6	0.508	5- 6	0.556	5- 6	0.565	5- 6	0.568	5- 6	0.568	5- 6	0.568	5- 6	0.568	5- 6	0.568	5- 4	0.587												
MAXIMUMS FOR PERIOD OF RECORD																																			
		4-12	0.879	4-12	0.577	4-12	0.721	4-12	0.790	4-12	0.806	4-12	0.810	4-10	0.947	4- 9	1.066																		
		1967		1967		1967		1967		1967		1967		1967		1967		1967		1967		1967		1967		1967		1967							

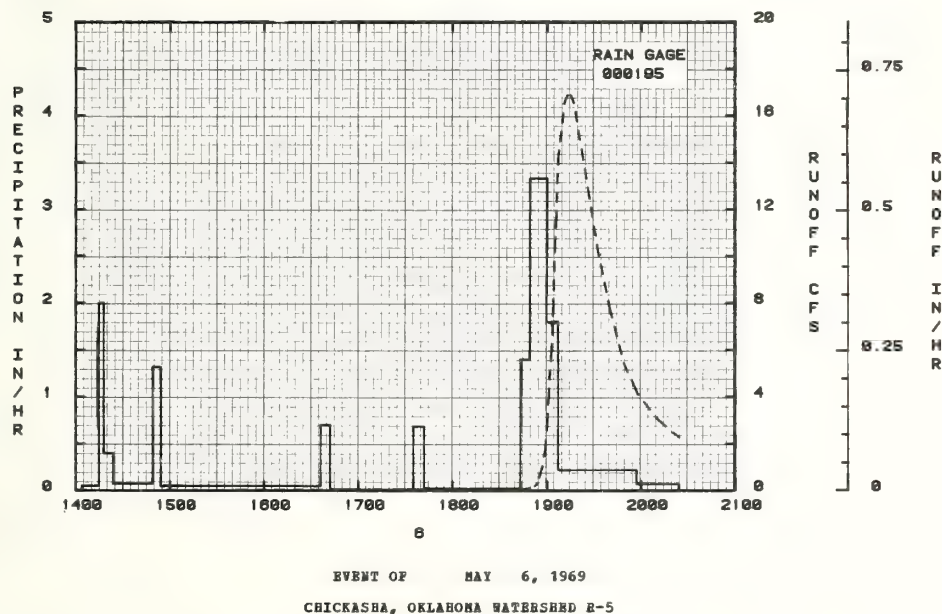
NOTES: Watershed conditions: Native grass rangeland, continuously grazed by beef cattle during recent years. Range condition class during 1969 was good, however, entire area was slightly overgrazed during October and November. The vegetative cover in early December 1969, based on 25 clipped samples uniformly spaced, averaged 1,700 pounds of standing vegetation per acre and 2,600 pounds per acre of mulch. This watershed was within the same pasture area as Watershed R-6, however, was subjected to a slightly heavier grazing rate. For general description of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, p. 69.42-1; Maps - Topography, 1966, p. 69.42-3 of foregoing reference; revised Composite, 1965, USDA Misc. Pub. 1216, p. 69.7-21. Monthly precipitation obtained from Thiessen weighted rainfall values from two gages, numbers 195 and 196. Precipitation and runoff records began July 1, 1966. STA AV based on 4 yr (1966-69) record period. For long-time precipitation records, see U. S. Weather Bureau records at Chickasha, Oklahoma.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED R-5												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0													
2	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.46	0.39	0.0	0.01	0.0													
3	0.0	0.0	0.01	0.0	1.59	0.0	0.0	0.0	0.04	0.0	0.0	0.0													
4	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
5	0.0	0.0	0.14	0.0	0.36	0.0	0.0	0.0	0.0	0.24	0.0	0.77													
6	0.0	0.0	0.0	0.0	1.69	0.0	0.0	0.0	0.0	0.36	0.0	0.02													
7	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
11	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.21	0.0	0.0	0.0													
12	0.0	0.0	0.0	0.05	0.54	0.0	0.0	0.0	0.0	0.45	0.0	0.0													
13	0.0	0.53	0.0	0.07	0.01	1.73	0.0	0.0	0.0	0.0	0.0	0.0													
14	0.0	1.12	0.05	0.0	0.01	1.72	0.0	0.0	0.06	0.0	0.0	0.0													
15	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0													
16	0.0	0.0	0.0	0.43	0.29	0.0	0.0	0.0	1.34	0.0	0.0	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
18	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0													
19	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
20	0.0	0.61	0.0	0.0	0.0	0.0	3.26	0.0	0.0	0.01	0.0	0.06													
21	0.0	0.23	0.0	0.0	0.0	0.0	0.03	0.0	0.78	0.03	0.0	0.0													
22	0.0	0.0	0.36	0.0	0.0	0.0	0.05	0.57	0.80	0.07	0.0	0.0													
23	0.0	0.04	1.03	0.07	0.0	0.0	0.0	0.06	0.0	0.20	0.0	0.0													
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
25	0.0	0.0	0.0	0.0	0.0	0.0	0.56	1.09	0.0	0.0	0.0	0.0													
26	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.0	0.0	0.01	0.38	0.0													
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0													
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44													
29	0.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.24													
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05													
31	0.07	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0													
TOTAL	0.70	2.53	2.08	1.03	4.86	3.98	3.97	2.54	3.62	1.71	0.39	1.58													
STA AV	1.17	1.24	2.05	3.36	4.55	2.79	3.30	2.74	3.64	1.78	1.48	1.06													

NOTES: Precipitation obtained from Thiessen weighted rainfall values from two gages, Nos. 195 and 196. STA AV based on 4 yr (1966-69) record period.

1969 SELECTED RUNOFF EVENT						CHICKASHA, OKLAHOMA WATERSHED R-5				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF MAY 6, 1969										
RG 000195			RG 000195							
5- 6	0.0	0.0	5- 6	1404	0.0	0.0	5- 6	1454	0.0	0.0
				1415	0.0545	0.01		1505	0.0	0.0
				1418	2.0000	0.11		1516	0.0	0.0
				1424	0.4000	0.15		1543	0.020	0.0002
				1449	0.0720	0.18		1643	0.020	0.0012
WATERSHED CONDITIONS:				1454	1.3200	0.29		1659	0.020	0.0015
100% rangeland, slightly				1636	0.0471	0.37		1735	0.050	0.0024
overgrazed; however, range				1642	0.7000	0.44		1757	0.050	0.0031
condition class good to				1735	0.0113	0.45		1842	0.050	0.0046
excellent.				1742	0.6857	0.53		1849	0.100	0.0050
30 Day Antecedent Conditions:				1843	0.0197	0.55		1852	0.190	0.0053
Date	Rainfall	Runoff		1849	1.3999	0.69		1854	0.330	0.0057
04-12	0.05	0.000		1900	3.3273	1.30		1855	0.550	0.0060
04-13	0.07	0.000		1907	1.8002	1.51		1857	1.050	0.0071
04-16	0.43	0.000		1957	0.2160	1.69		1859	1.750	0.0090
04-23	0.07	0.000		2024	0.0667	1.72		1900	2.870	0.0107
04-26	0.41	0.000						1901	3.950	0.0130
05-03	1.59	0.014						1903	6.270	0.0201
05-04	0.19	0.001						1904	7.770	0.0251
05-05	0.36	0.004						1905	10.430	0.0314
								1906	11.910	0.0391
								1907	14.110	0.0482
								1909	15.310	0.0687
								1911	16.550	0.0908
								1913	16.860	0.1142
								1915	16.860	0.1378
								1917	16.550	0.1610
								1923	14.110	0.2251
								1927	12.460	0.2622
								1932	10.430	0.3020
								1940	7.770	0.3527
								1949	5.430	0.3941
								1958	4.090	0.4240
								2011	2.990	0.4560
								2024	2.270	0.4799

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.04181. Antecedent precipitation amounts are from Thiessen weighted rainfall using rain gages 195 and 196. For Isohyetal map, see p. 69.9-5 of this publication.



CHICKASHA, OKLAHOMA WATERSHED R-6

LOCATION: Grady County, Oklahoma; SW 1/4, sec. 12, T. 7 N., R. 6 W., about 8-1/2 miles east and 3 miles north of Chickasha, Oklahoma; Washita River Basin.

AREA: 27.22 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED R-6									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	0.72	2.62	2.14	0.99	5.01	3.85	3.92	2.51	3.70	1.63	0.38	1.67	29.34									
	Q	0.0	0.079	0.045	0.0	0.710	0.275	0.108	0.0	0.0	0.0	0.0	0.0	1.217									
STA AV	P	1.18	1.31	2.05	3.29	4.70	2.78	3.29	2.74	3.66	1.75	1.47	1.06	28.95									
	Q	0.0	0.026	0.052	0.370	0.271	0.103	0.062	0.009	0.014	0.002	0.010	0.0	0.920									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		5- 6	0.845	5- 6	0.528	5- 6	0.627	5- 6	0.661	5- 6	0.671	5- 6	0.673	5- 5	0.674	5- 3	0.715						
MAXIMUMS FOR PERIOD OF RECORD																							
		4-12	1.066	4-12	0.658	4-12	0.808	4-12	0.879	4-12	0.889	4-12	0.892	4-11	0.989	4-10	1.098						
		1967		1967		1967		1967		1967		1967		1967		1967							

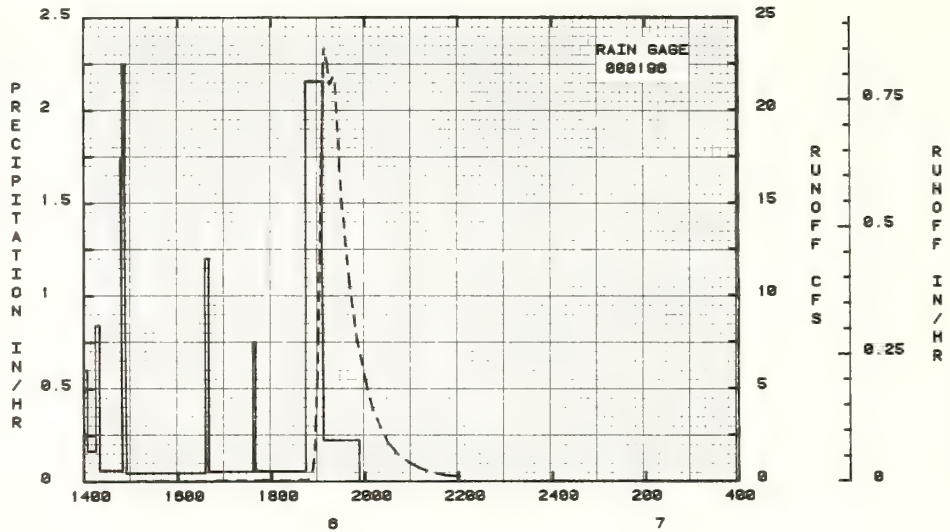
NOTES: Watershed conditions: Native grass rangeland, continuously grazed by beef cattle during recent years. Range condition class during the year was good, however, was slightly overgrazed during October and November. The vegetative cover in early December 1969, based on 25 clipped samples uniformly spaced, averaged 3,600 pounds per acre of standing vegetation and 3,200 pounds of mulch. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, pp. 69.43-1 and 69.43-3. Monthly precipitation obtained from Thiessen weighted rainfall values from two gages, numbers 196 and 197. Precipitation and runoff records began July 1, 1966. STA AV based on 4 yr (1966-69) record period. For long-time precipitation records, see U. S. Weather Bureau records at Chickasha, Oklahoma.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED R-6	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.46	0.0	0.0	0.0	0.0	0.45	0.40	0.0	0.01	0.0		
3	0.0	0.0	0.02	0.0	1.77	0.0	0.0	0.0	0.04	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.15	0.0	0.33	0.0	0.0	0.0	0.0	0.22	0.0	0.81		
6	0.0	0.0	0.0	0.0	1.73	0.0	0.0	0.0	0.0	0.38	0.0	0.03		
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.21	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.04	0.51	0.0	0.0	0.0	0.0	0.40	0.0	0.0		
13	0.0	0.54	0.0	0.08	0.02	1.72	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	1.17	0.05	0.0	0.01	1.61	0.0	0.0	0.05	0.0	0.0	0.0		
15	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.41	0.28	0.0	0.0	0.0	1.36	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.61	0.0	0.0	0.0	0.0	3.19	0.0	0.0	0.01	0.0	0.08		
21	0.0	0.25	0.0	0.0	0.0	0.0	0.04	0.0	0.79	0.04	0.0	0.0		
22	0.0	0.0	0.34	0.0	0.0	0.0	0.05	0.52	0.85	0.06	0.0	0.0		
23	0.0	0.05	1.06	0.07	0.0	0.0	0.0	0.06	0.0	0.19	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.54	1.12	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0	0.01	0.37	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46		
29	0.64			0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.25		
30	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04		
31	0.07				0.0		0.10	0.0		0.0		0.0		
TOTAL	0.72	2.62	2.14	0.99	5.01	3.85	3.92	2.51	3.70	1.63	0.38	1.67		
STA AV	1.18	1.31	2.05	3.29	4.70	2.78	3.29	2.74	3.66	1.75	1.47	0.72		

NOTES: Precipitation obtained from Thiessen weighted rainfall values from two gages, Nos. 196 and 197. STA AV based on 4 yr (1966-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED R-6						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
									Acc. (inches)
EVENT OF MAY 6, 1969									
RG 000196			RG 000196						
5- 6	0.0	0.0	5- 6	1400	0.0	0.0	5- 6	1456	0.0
				1404	0.6000	0.04		1501	0.0
				1415	0.1636	0.07		1507	0.030
				1420	0.8400	0.14		1519	0.050
				1449	0.0621	0.17		1535	0.050
WATERSHED CONDITIONS:				1453	2.2500	0.32		1635	0.030
100% rangeland, slightly over-				1635	0.0471	0.40		1651	0.050
grazed; however, range				1640	1.2001	0.50		1800	0.080
condition class good to				1736	0.0536	0.55		1811	0.050
excellent.				1740	0.7500	0.60		1847	0.110
30 Day Antecedent Conditions:				1844	0.0563	0.66		1853	0.710
Rainfall Runoff				1906	2.1545	1.45		1855	1.730
Date (inches)		(inches)		1952	0.2217	1.62		1857	3.540
04-12	0.04	0.000						1859	5.900
04-13	0.08	0.000						1900	7.740
04-16	0.41	0.000						1902	12.410
04-23	0.07	0.000						1904	17.180
04-26	0.39	0.000						1905	18.500
05-03	1.76	0.034						1906	20.280
05-04	0.20	0.000						1907	22.530
05-05	0.33	0.002						1908	23.300
								1909	23.300
								1912	22.530
								1915	21.380
								1919	21.760
								1922	21.380
								1927	17.180
								1931	14.660
								1941	10.370
								1949	7.740
								2003	4.940
								2010	3.810
								2029	2.060
								2042	1.430
								2059	0.930
								2119	0.550
								2142	0.330
								2201	0.250

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.03643. Antecedent precipitation amounts are from Thiessen weighted rainfall using rain gages 196 and 197. For Isohyetal map, see p. 69.9-5 of this publication.



EVENT OF MAY 6, 1969
CHICKASHA, OKLAHOMA WATERSHED R-6

CHICKASHA, OKLAHOMA WATERSHED E-7

LOCATION: Grady County, Oklahoma; NW 1/4, sec. 13, T. 7 N., R. 6 W., about 8 miles east and 2-1/2 miles north of Chickasha, Oklahoma; Washita River Basin.

AREA: 19.19 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED E-7															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.78	2.31	1.91	1.00	4.56	3.73	3.49	2.39	3.54	1.50	0.36	1.41	26.98															
	Q	0.0	0.317	0.178	0.0	1.400	1.207	0.658	0.022	0.203	0.0	0.0	0.0	3.965															
STA AV	P	1.16	1.16	2.00	3.14	4.44	2.75	3.15	2.76	3.50	1.61	1.38	1.01	28.04															
	Q	0.097	0.110	0.269	0.807	0.839	0.618	0.524	0.159	0.361	0.118	0.183	0.0	4.088															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																					
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days													
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		5- 6	2.179	6-13	0.841	6-13	1.143	6-13	1.206	6-13	1.206	6-13	1.206	6-13	1.206	5- 3	1.281												
MAXIMUMS FOR PERIOD OF RECORD																													
		5- 6	2.179	4-12	0.939	6-13	1.143	4-12	1.322	4-12	1.360	4-12	1.377	4-10	1.735	4- 9	2.266												
		1969		1967		1969		1967		1967		1967		1967		1967													

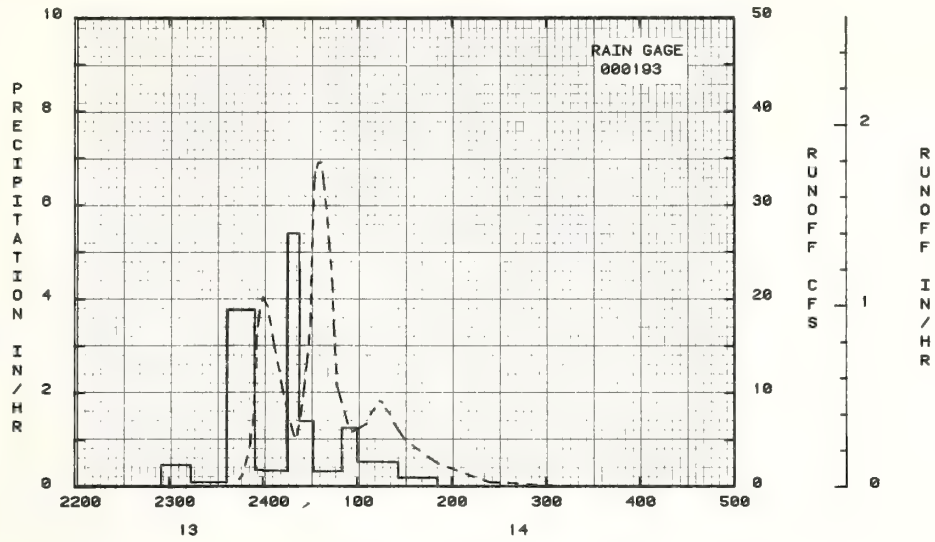
NOTES: Watershed conditions: Formerly cultivated from about 1907 until about 1935 when the land use was changed to pasture because of severe erosion. Range condition class during the year was poor. The vegetative cover in early December 1969, based on 25 clipped samples uniformly spaced, averaged 1,100 pounds per acre of standing vegetation and 1,300 pounds per acre of mulch. This watershed was within the same pasture area as Watershed E-8. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, pp. 69.44-1 and 69.44-3. Monthly precipitation obtained from Thiessen weighted rainfall values from two gages, number 193 and 194. Precipitation and runoff records began July 1, 1966. STA AV based on 4 yr (1966-69) record period. For long-time precipitation records, see U. S. Weather Bureau records at Chickasha, Oklahoma.

1969 DAILY PRECIPITATION (inches)													CHICKASHA, OKLAHOMA WATERSHED E-7												
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
1	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.0												
2	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.46	0.41	0.0	0.01	0.0												
3	0.0	0.0	0.0	0.01	0.0	1.35	0.0	0.0	0.0	0.01	0.0	0.0	0.0												
4	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
5	0.0	0.0	0.0	0.11	0.0	0.34	0.0	0.0	0.0	0.0	0.21	0.0	0.67												
6	0.0	0.0	0.0	0.0	0.0	1.64	0.0	0.0	0.0	0.0	0.35	0.0	0.02												
7	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
11	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.24	0.0	0.0	0.0												
12	0.0	0.0	0.0	0.05	0.05	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.0												
13	0.0	0.47	0.0	0.07	0.01	1.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
14	0.0	1.01	0.05	0.0	0.01	1.61	0.0	0.0	0.0	0.05	0.0	0.0	0.0												
15	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0												
16	0.0	0.0	0.0	0.0	0.43	0.25	0.0	0.0	0.0	1.35	0.0	0.0	0.0												
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
18	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0												
19	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
20	0.0	0.56	0.0	0.0	0.0	0.0	0.0	2.84	0.0	0.0	0.01	0.0	0.07												
21	0.01	0.22	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.77	0.03	0.0	0.0												
22	0.0	0.0	0.31	0.0	0.0	0.0	0.0	0.04	0.52	0.71	0.05	0.0	0.0												
23	0.0	0.05	0.93	0.04	0.0	0.0	0.0	0.0	0.05	0.0	0.17	0.0	0.0												
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	1.01	0.0	0.0	0.0	0.0												
26	0.0	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.0	0.0	0.01	0.35	0.0												
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0												
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39												
29	0.67		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.22												
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04												
31	0.08		0.0			0.0		0.07	0.0		0.0		0.0												
TOTAL		0.78	2.31	1.91	1.00	4.56	3.73	3.49	2.39	3.54	1.50	0.36	1.41												
STA AV		1.16	1.16	2.00	3.14	4.44	2.75	3.15	2.76	3.50	1.61	1.38	1.01												

NOTES: Precipitation obtained from Thiessen weighted rainfall values from two gages, Nos. 193 and 194. STA AV based on 4 yr (1966-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED E-7							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF JUNE 13 - 14, 1969										
RG 000193			RG 000193							
6-13	0.0	0.0	6-13	2255	0.0	0.0	6-13	2340	0.0	0.0
				2314	0.4737	0.15		2341	0.08	0.0
				2337	0.1043	0.19		2345	0.87	0.0015
				2355	3.7666	1.32		2347	1.35	0.0034
				2400	0.3600	1.35		2352	4.62	0.0139
WATERSHED CONDITIONS:										
100% rangeland, formerly			6-14	16	0.3375	1.44		2354	7.72	0.0243
cultivated. Range condition				23	5.4000	2.07		2356	16.17	0.0461
class fair to poor.				32	1.4000	2.28		2358	18.63	0.0769
				50	0.3333	2.38		2400	20.25	0.1107
30 Day Antecedent Conditions:				100	1.2600	2.59	6-14	3	19.17	0.1619
Date	Rainfall	Runoff								
(inches)	(inches)	(inches)								
05-13	0.01	0.000		126	0.5308	2.82		7	15.24	0.2222
05-14	0.01	0.000		151	0.1920	2.90		12	10.84	0.2774
05-15	0.00	0.000		230	0.0154	2.91		16	7.72	0.3088
05-16	0.25	0.000						20	5.38	0.3314
05-17	0.00	0.000						22	5.54	0.3406
05-18	0.00	0.000						24	7.72	0.3515
05-19	0.00	0.000						26	10.35	0.3670
06-01	0.36	0.000						28	13.20	0.3874
06-13	0.28	0.000						30	17.47	0.4133
								32	30.65	0.4536
								33	33.56	0.4812
								34	34.07	0.5106
								35	34.57	0.5400
								36	34.57	0.5697
								37	34.57	0.5994
								38	33.07	0.6288
								39	31.61	0.6565
								42	26.17	0.7315
								44	21.73	0.7727
								45	17.14	0.7897
								46	14.05	0.8030
								47	10.84	0.8137
								50	8.98	0.8393
								54	6.76	0.8661
								57	5.88	0.8823
								106	6.76	0.9316
								109	7.92	0.9505
								111	8.33	0.9645
								114	9.20	0.9872
								116	8.98	1.0029
								118	8.33	1.0177
								121	7.72	1.0385
								124	6.57	1.0570
								130	5.07	1.0872
								145	3.18	1.1405
								152	2.43	1.1574
								224	0.51	1.1937
								306	0.11	1.2037
								356	0.02	1.2061
								450	0.01	1.2069
								613	0.00	1.2072
								815	0.0	1.2074

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.05168. Antecedent precipitation amounts are from Thiessen weighted rainfall using rain gages 193 and 194.



EVENT OF JUNE 13 - 14, 1969
CHICKASHA, OKLAHOMA WATERSHED R-7

CHICKASHA, OKLAHOMA WATERSHED R-8

LOCATION: Grady County, Oklahoma; NW 1/4 sec. 13, T. 7 N., R. 6 W., about 8-1/2 miles east and 2-1/2 miles north of Chickasha, Oklahoma; Washita River Basin.

AREA: 27.55 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														CHICKASHA, OKLAHOMA WATERSHED R-8															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.75	2.51	2.04	0.98	5.06	3.77	3.66	2.33	3.57	1.48	0.34	1.64	28.83															
	Q	0.002	0.184	0.085	0.014	1.328	0.826	0.455	0.016	0.095	0.0	0.0	0.0	3.005															
STA AV	P	1.18	1.32	2.08	3.15	4.74	2.80	3.23	2.71	3.60	1.65	1.41	1.06	28.94															
	Q	0.027	0.062	0.118	0.493	0.623	0.402	0.333	0.069	0.170	0.056	0.070	0.001	2.339															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		12 Hours		1 Day		2 Days		6 Days													
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		5- 6	1.828	5- 6	0.724	5- 6	0.813	5- 6	0.902	5- 6	0.931	5- 6	0.944	5- 4	0.968	5- 4	1.219												
MAXIMUMS FOR PERIOD OF RECORD																													
		5- 6	1.828	5- 6	0.724	4-12	0.840	4-12	0.957	4-12	0.980	4-12	1.002	4-11	1.153	4-10	1.398												
		1969		1969		1967		1967		1967		1967		1967		1967													

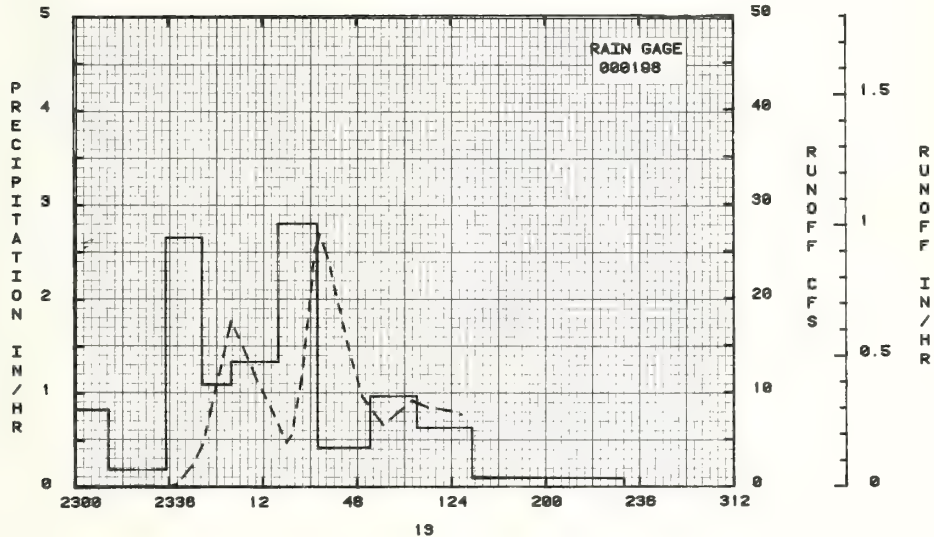
NOTES: Watershed conditions: Eighty-six percent of the area was cultivated from about 1907 until about 1935 when the land use was changed to pasture because of severe erosion. Although the watershed has not been reseeded to grass, the predominant grass species is little bluestem. Range condition class during the year was poor. The vegetative cover in early December 1969, based on 25 clipped samples uniformly spaced, averaged 1,650 pounds per acre of standing vegetation and 1,400 pounds per acre of mulch. This watershed was within the same pasture area as Watershed R-7. For general description and map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1966, USDA Misc. Pub. 1226, pp. 69.45-1 and 69.45-3. Monthly precipitation obtained from Thiessen weighted rainfall values from two gages, numbers 197 and 198. Precipitation and runoff records began July 1, 1966. STA AV based on 4 yr (1966-69) record period. For long-time precipitation records, see U. S. Weather Bureau records at Chickasha, Oklahoma.

1969 DAILY PRECIPITATION (inches) CHICKASHA, OKLAHOMA WATERSHED R-8													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.48	0.0	0.0	0.0	0.0	0.40	0.37	0.0	0.01	0.0	
3	0.0	0.0	0.04	0.0	1.75	0.0	0.0	0.0	0.02	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.12	0.0	0.31	0.0	0.0	0.0	0.0	0.18	0.0	0.73	
6	0.0	0.0	0.0	0.0	1.82	0.0	0.0	0.0	0.0	0.33	0.0	0.02	
7	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.23	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.03	0.53	0.0	0.0	0.0	0.0	0.37	0.0	0.0	
13	0.0	0.51	0.0	0.09	0.01	1.64	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	1.13	0.07	0.0	0.0	1.58	0.0	0.0	0.04	0.0	0.0	0.0	
15	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.41	0.26	0.0	0.0	1.34	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	
19	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.59	0.0	0.0	0.0	0.0	2.90	0.0	0.0	0.01	0.0	0.07	
21	0.0	0.24	0.0	0.0	0.0	0.0	0.05	0.0	0.76	0.03	0.0	0.0	
22	0.0	0.0	0.29	0.0	0.0	0.0	0.06	0.46	0.81	0.06	0.0	0.0	
23	0.0	0.04	0.98	0.06	0.0	0.0	0.0	0.06	0.0	0.18	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.53	1.06	0.0	0.0	0.0	0.0	
26	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0	0.01	0.33	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	
29	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.27	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	
31	0.07	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.75	2.51	2.04	0.98	5.06	3.77	3.66	2.33	3.57	1.48	0.34	1.64	
STA AV	1.18	1.32	2.08	3.15	4.74	2.80	3.23	2.71	3.60	1.65	1.41	1.06	

NOTES: Precipitation obtained from Thiessen weighted rainfall values from two gages, Nos. 197 and 198. STA AV based on 4 yr (1966-69) record period.

1969 SELECTED RUNOFF EVENT			CHICKASHA, OKLAHOMA WATERSHED R-8							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 13 - 14, 1969										
RG 000198			RG 000198							
6-13	0.0	0.0	6-13	2300	0.0	0.0	6-13	2300	0.0	0.0
				2313	0.8308	0.18		2306	0.030	0.0001
				2335	0.1909	0.25		2309	0.030	0.0001
				2349	2.6571	0.87		2313	0.060	0.0002
				2400	1.0909	1.07		2316	0.110	0.0004
WATERSHED CONDITIONS:			6-14	18	1.3333	1.47		2319	0.110	0.0006
100% rangeland, formerly				33	2.8000	2.17		2323	0.190	0.0009
cultivated. Range condition				53	0.4200	2.31		2326	0.220	0.0013
class fair to poor.				111	0.9667	2.60		2327	0.220	0.0014
30 Day Antecedent Conditions:				132	0.6286	2.82		2335	0.110	0.0022
Rainfall Runoff				230	0.0931	2.91		2339	0.390	0.0028
Date	(inches)	(inches)						2341	1.030	0.0037
05-12	0.53	0.067						2345	2.420	0.0078
05-13	0.02	0.000						2349	4.610	0.0162
05-16	0.26	0.000						2352	8.080	0.0276
06-01	0.40	0.000								
06-13	0.30	0.000								
								2357	14.000	0.0608
								2400	17.700	0.0894
							6-14	5	14.580	0.1377
								10	11.280	0.1765
								15	8.500	0.2062
								21	4.750	0.2300
								23	5.530	0.2362
								27	11.810	0.2570
								31	21.970	0.2975
								32	25.170	0.3116
								34	26.830	0.3429
								37	24.330	0.3888
								45	14.580	0.4824
								50	9.610	0.5186
								58	6.560	0.5574
								106	8.500	0.5935
								109	9.170	0.6094
								115	8.500	0.6413
								124	8.080	0.6860
								128	7.690	0.7049

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.03600. Antecedent precipitation amounts are from Thiessen weighted rainfall using rain gages 197 and 198.



EVENT OF JUNE 13 - 14, 1969
CHICKASHA, OKLAHOMA WATERSHED R-8

SONORA, TEXAS WATERSHED W-14

LOCATION: Sutton County, Texas; gaging station on Water Street at Sonora city limit; Lowery Draw, East Fort Devils River, Devils River, Rio Grande River Basin.

AREA: 30720.00 acres 48.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)															SONORA, TEXAS WATERSHED W-14														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.10	1.32	1.57	4.48	2.12	0.78	2.47	2.59	3.03	7.48	2.63	2.53	31.09															
	Q	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.074	0.0	0.0	0.076															
STA AV	P	0.81	1.21	0.92	2.79	3.16	1.52	1.61	1.39	4.07	1.93	1.62	0.85	21.90															
	Q	0.0	0.0	0.0	0.0	0.015	0.0	0.0	0.0	0.105	0.009	0.0	0.0	0.129															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		10-28	0.003	10-28	0.003	10-28	0.007	10-28	0.020	10-28	0.035	10-28	0.059	10-28	0.073	10-23	0.073												
MAXIMUMS FOR PERIOD OF RECORD																													
		9-23	0.060	9-23	0.060	9-23	0.120	9-23	0.220	9-23	0.270	9-23	0.380	9-23	0.610	9-21	0.800												
		1964		1964		1964		1964		1964		1964		1964		1964													

NOTES: Watershed conditions: 0.4% caliche and paved roads; 0.3% urban area; 0.3% cropland; 99.0% rangeland. Cropland seeded to oats in fall for winter grazing. Rangeland moderately to severely overgrazed during the year depending on climatic conditions and stocking rates. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.1-7. Precipitation data by Thiessen method using rain gages 1, 1-A, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13. Precipitation and runoff records began May 1961; part-year amounts not included in averages. For long-time precipitation records, see U.S. Weather Bureau records at Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY AIR TEMPERATURE (degrees F)													SONORA, TEXAS WATERSHED W-14												
Day	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	
1	37	18	68	41	64	47	77	52	76	57	96	69	98	70	95	69	87	62	89	58	66	39	64	37	
2	58	30	73	36	64	44	78	55	75	62	83	62	98	67	96	70	88	64	88	62	64	40	68	36	
3	55	27	68	34	61	35	75	56	74	53	83	61	99	71	95	68	87	66	87	65	61	32	64	44	
4	44	23	56	32	53	29	83	62	79	53	78	58	98	73	97	68	86	64	84	65	68	35	60	44	
5	53	20	58	45	62	43	83	47	80	56	89	57	97	72	95	73	89	68	83	64	71	37	61	49	
6	72	30	77	40	65	32	81	49	79	66	88	58	95	72	95	62	88	70	83	62	76	37	58	34	
7	75	36	83	52	75	42	83	53	75	58	87	62	95	72	95	71	91	67	74	52	84	43	53	25	
8	84	41	80	39	70	31	87	63	75	60	89	65	93	70	95	69	91	66	78	51	85	49	55	31	
9	83	27	60	35	53	23	87	60	74	42	90	66	95	70	94	70	91	66	79	58	80	59	57	33	
10	45	22	69	36	52	31	84	53	72	45	93	66	99	71	100	70	88	69	86	60	75	56	64	32	
11	53	23	73	39	42	33	79	55	78	52	92	66	99	70	103	72	87	63	85	67	80	59	62	30	
12	62	29	71	40	63	27	66	50	77	60	95	66	99	69	104	72	79	62	80	58	82	49	67	35	
13	63	34	64	49	64	31	72	46	83	57	92	65	98	72	103	72	82	60	59	39	78	53	70	40	
14	60	53	63	45	58	50	75	51	83	57	87	70	97	69	106	72	84	68	65	38	67	40	68	36	
15	62	54	60	36	57	38	78	53	83	62	84	63	101	72	104	71	89	60	73	45	60	29	75	34	
16	67	43	59	30	41	33	82	64	82	58	87	65	99	68	105	70	92	69	73	49	67	43	73	43	
17	71	42	58	37	51	35	81	50	82	56	90	67	97	67	105	69	92	65	64	56	63	56	70	43	
18	69	37	51	31	77	32	74	43	81	46	101	66	96	65	104	68	80	64	75	61	65	40	68	49	
19	56	36	49	39	86	47	79	48	87	56	102	71	96	70	102	72	79	60	76	64	51	20	65	47	
20	64	49	53	41	84	47	75	49	89	65	104	70	97	78	98	71	80	58	80	63	57	20	66	50	
21	76	48	55	42	72	43	79	52	89	60	104	74	97	70	96	68	80	65	80	61	63	27	71	43	
22	79	46	65	29	69	40	79	53	85	57	101	73	95	66	97	68	83	67	76	59	67	41	73	44	
23	77	43	65	42	72	44	82	53	85	54	100	77	88	68	96	68	84	64	71	55	63	44	73	49	
24	70	23	72	35	59	45	81	54	83	59	103	67	97	68	95	69	79	59	63	51	54	43	73	41	
25	63	26	71	45	57	32	79	58	88	58	97	76	98	70	82	65	86	62	74	52	55	48	71	36	
26	70	45	68	50	63	32	81	62	89	62	99	75	96	71	78	65	86	62	76	55	54	47	62	36	
27	72	44	73	49	70	36	78	52	75	66	96	76	94	74	81	67	86	60	72	42	52	30	63	45	
28	70	46	70	37	77	50	72	43	86	61	97	71	93	68	83	68	85	58	43	38	32	30	61	38	
29	69	61			82	52	75	48	91	59	94	72	97	69	82	67	88	59	61	40	51	33	38	30	
30	67	50			71	45	75	48	91	62	95	72	99	67	85	65	87	58	59	50	59	30	42	29	
31	58	48			76	47			94	67			99	68	86	64			63	35			46	24	
AV.	64	37	65	39	64	38	78	52	82	57	93	67	96	70	95	68	85	63	74	54	65	40	63	38	
MEAN	51.0		52.5		51.8		65.7		69.8		80.4		83.4		82.1		74.7		64.1		52.7		50.8		
STA AV	59	32	60	34	69	42	79	53	83	59	89	65	93	67	92	67	85	62	78	52	69	44	60	34	

NOTES: Temperature data taken daily with maximum and minimum thermometers. Readings were taken at 1630 of the day shown. STA AV based on 6 yr record period.

1969	DAILY PRECIPITATION (inches)					SONORA, TEXAS WATERSHED #14						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.54	0.36E	0.0	0.0	0.02E	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	1.10	0.0	0.0
5	0.0	0.0	0.11E	0.0	0.91	0.0	0.0	0.0	0.0	0.0	0.0	0.45
6	0.0	0.0	0.0	0.0	0.26E	0.0	0.0	0.0	0.0	0.03E	0.0	0.32
7	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.05E	0.0	0.0	0.0
9	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.00E	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0
11	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.0	1.06	0.0	0.0	0.0
12	0.0	0.0	0.0	1.70	0.0	0.0	0.0	0.0	2.62	0.0	0.0	0.0
13	0.0	1.12	0.0	0.0	0.0	0.00E	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.0
15	0.0	0.0	0.44	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.14E	0.10E	0.0	0.0	0.0	0.0	0.0	0.15E	0.0
17	0.0	0.0	0.0	0.0	0.0	0.14E	0.0	0.0	0.98E	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.68E	0.0	0.0	0.0
19	0.0	0.09E	0.0	0.73	0.0	0.0	0.34E	0.0	0.0	0.0	0.0	0.0
20	0.0	0.10E	0.0	0.71	0.0	0.0	0.0	0.17E	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.0	0.07E	0.0	0.0	0.0
22	0.0	0.0	0.01	0.0	0.0	0.0	0.26E	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.94	0.0	0.0	0.0	0.06	0.45E	0.02E	0.09E	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	1.03	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28E	0.0	0.0	0.19E	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19E	0.0	0.0	0.74	0.0
27	0.0	0.0	0.0	0.96	0.0	0.0	1.14	0.34E	0.0	0.84	0.18E	0.10E
28	0.03E	0.0	0.0	0.0	0.0	0.0	0.19E	0.39E	0.0	2.75	0.34E	1.28
29	0.02E		0.0	0.0	0.0	0.0	0.0	0.28E	0.0	0.05	0.0	0.38E
30	0.0		0.07E	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.0
31	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.10	1.32	1.57	4.48	2.12	0.78	2.47	2.59	3.03	7.48	2.63	2.53
STA AV	0.81	1.21	0.92	2.79	3.16	1.52	1.61	1.39	4.07	1.93	1.62	0.85

NOTES: Precipitation values are Thiessen weighted average of rain gages 1, 1-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr period.

1969	MEAN DAILY DISCHARGE (cfs)					SONORA, TEXAS WATERSHED #14						
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	2.716	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.440	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.265	0.0	0.0
29	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.046	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.744	0.0	0.0
31	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.107	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0876	0.0	0.0	0.0	0.0	3.0839	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0	0.0	0.074	0.0	0.0
STA AV	0.0	0.0	0.0	0.0	0.015	0.0	0.0	0.0	0.105	0.009	0.0	0.0

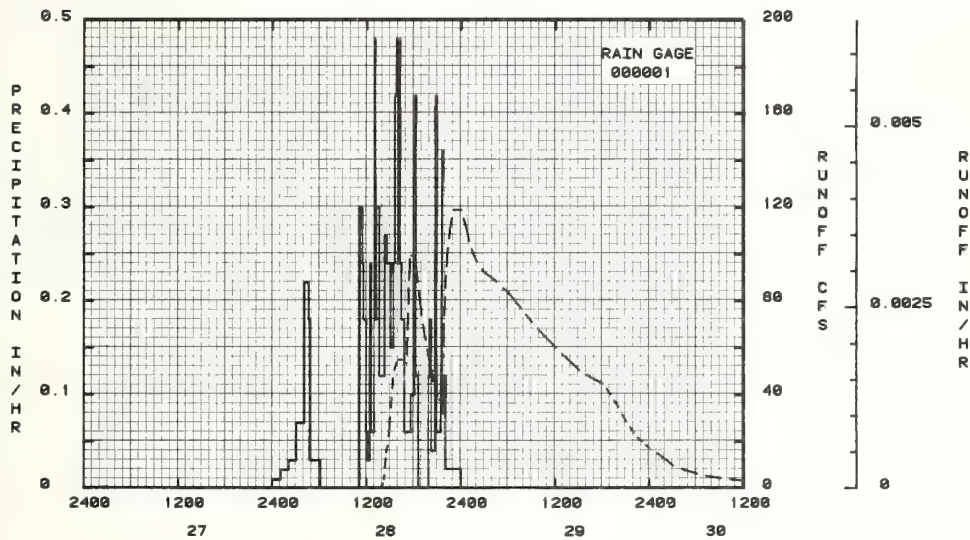
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.000775. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr period.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-14							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 27 - 31, 1969										
RG 000001			RG 000001							
10-27	0.92		10-27	2400	0.0	0.0	10-28	1340	0.0	0.0
10-28		0.0	10-28	105	0.0092	0.01		1345	0.150	0.0
				205	0.0200	0.03		1350	0.470	0.0
				305	0.0300	0.06		1355	0.910	0.0
				405	0.0700	0.13		1400	1.500	0.0
WATERSHED CONDITIONS:				435	0.2200	0.24		1405	2.120	0.0
0.4% caliche and paved roads;				445	0.1800	0.27		1410	3.870	0.0
0.3% urban area; 0.3% crop-				605	0.0300	0.31		1415	5.750	0.0
land; 99.0% rangeland.				1105	0.0	0.31		1420	8.970	0.0
Cropland seeded to oats in				1125	0.3000	0.41		1425	12.970	0.0
fall for winter grazing.				1135	0.2400	0.45		1430	15.390	0.0
Rangeland moderately to				1155	0.1800	0.51		1440	18.290	0.0001
severely overgrazed during				1205	0.0601	0.52		1450	23.340	0.0002
the year depending on				1225	0.0300	0.53		1500	30.570	0.0003
climatic conditions and				1230	0.2400	0.55		1510	38.740	0.0005
stocking rates.				1235	0.2401	0.57		1520	46.760	0.0007
				1255	0.0600	0.59		1530	50.660	0.0010
				1305	0.4800	0.67		1545	53.700	0.0014
				1315	0.1800	0.70		1600	55.090	0.0018
				1325	0.3000	0.75		1630	55.090	0.0027
				1335	0.3000	0.80		1700	53.360	0.0036
				1415	0.1200	0.88		1705	53.360	0.0037
				1435	0.2700	0.97		1710	63.860	0.0035
				1445	0.2400	1.01		1715	70.810	0.0041
				1505	0.2400	1.09		1720	85.260	0.0043
				1525	0.1500	1.14		1725	92.390	0.0045
				1535	0.2401	1.18		1730	98.040	0.0048
				1545	0.4200	1.25		1735	99.530	0.0051
				1555	0.4800	1.33		1805	99.530	0.0067
				1605	0.2400	1.37		1815	94.620	0.0072
				1615	0.4800	1.45		1830	88.320	0.0079
				1625	0.2401	1.49		1845	80.500	0.0086
				1645	0.1800	1.55		1900	74.090	0.0092
				1705	0.0600	1.57		1915	68.930	0.0098
				1735	0.0600	1.60		1930	63.480	0.0103
				1805	0.1000	1.65		1945	58.530	0.0108
				1815	0.4200	1.72		2000	54.390	0.0113
				1835	0.1200	1.76		2015	50.220	0.0117
				1955	0.0	1.76		2030	45.810	0.0121
				2005	0.1200	1.78		2045	42.940	0.0125
				2015	0.1800	1.81		2100	39.500	0.0128
				2045	0.0400	1.83		2115	37.700	0.0131
				2055	0.4200	1.90		2120	37.700	0.0132
				2105	0.0601	1.91		2125	40.950	0.0133
				2125	0.0600	1.93		2130	46.130	0.0134
				2135	0.1199	1.95		2135	52.680	0.0135
				2140	0.3600	1.98		2140	56.970	0.0136
				2155	0.0800	2.00		2145	63.860	0.0138
				2205	0.1200	2.02		2150	70.130	0.0140
				2400	0.0209	2.06		2155	77.620	0.0142
								2200	85.870	0.0144
								2205	90.960	0.0146
								2210	94.950	0.0148
								2220	102.720	0.0153
								2235	110.340	0.0162
								2250	115.360	0.0171
								2305	119.030	0.0180
								2400	115.030	0.0215
								30	113.190	0.0234
								100	106.140	0.0252
								130	100.360	0.0269
								200	96.900	0.0285
								300	92.070	0.0316
								430	88.320	0.0360
								600	83.610	0.0402
								730	77.470	0.0441
								900	71.080	0.0477
								1030	65.520	0.0510
								1200	60.230	0.0540
								1330	55.440	0.0568
								1500	50.660	0.0594
								1630	47.500	0.0616
								1800	44.770	0.0640
								1830	42.640	0.0647
								1900	40.270	0.0654

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000032.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-14					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	Mo-Day	of Day	(cfs)
Acc. (inches)								
EVENT OF OCTOBER 27 - 31, 1969 (CONTINUED)								
				10-29		1930	37.520	0.0660
						2000	34.690	0.0666
						2030	31.660	0.0671
						2100	28.700	0.0676
						2130	26.210	0.0680
						2200	23.700	0.0684
						2230	21.810	0.0688
						2300	20.200	0.0691
						2330	18.480	0.0694
						2400	17.130	0.0697
				10-30		130	13.800	0.0704
						300	9.760	0.0710
						430	7.740	0.0714
						600	6.330	0.0717
						730	5.140	0.0720
						900	4.360	0.0722
						1030	3.730	0.0724
						1200	3.160	0.0726
						1330	2.640	0.0727
						1500	2.240	0.0728
						1630	1.970	0.0729
						1800	1.760	0.0730
						1930	1.610	0.0731
						2100	1.410	0.0732
						2230	1.220	0.0733
				10-31		2400	0.940	0.0734
						130	0.680	0.0734
						300	0.410	0.0734

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000032.



EVENT OF OCTOBER 27 - 31, 1969

SONORA, TEXAS WATERSHED W-14

SONORA, TEXAS WATERSHED S-9

LOCATION: Sutton County, Texas; gaging station on Water Street at Sonora city limit; Lowrey Draw, East Fort Devils River, Devils River, Rio Grande River Basin.

AREA: 1774.00 acres 2.77 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED S-9											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	0.09	1.17	1.60	4.12	2.43	1.23	2.05	1.81	2.01	6.59	2.76	2.94	28.80											
	Q	0.0	0.0	0.001	0.003	0.003	0.0	0.0	0.0	0.001	0.019	0.0	0.030	0.057											
STA AV	P	0.81	1.21	0.95	2.47	2.88	1.61	1.52	1.22	4.29	1.86	1.43	0.89	21.14											
	Q	0.0	0.0	0.001	0.001	0.008	0.015	0.0	0.0	0.338	0.002	0.0	0.004	0.369											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				1 Day		2 Days		8 Days									
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		12- 6	0.019	12- 6	0.012	12- 6	0.017	12- 6	0.022	12- 6	0.022	12- 6	0.022	12- 6	0.022	12- 6	0.022								
MAXIMUMS FOR PERIOD OF RECORD																									
		9-23	1.190	9-23	0.570	9-23	0.800	9-23	1.040	9-23	1.070	9-23	1.270	9-22	1.450	9-19	2.680								
		1964		1964		1964		1964		1964		1964		1964		1964									

NOTES: Watershed conditions: 0.3% caliche roads; 99.7% rangeland. Rangeland fair condition to moderately over-grazed during a year depending on climatic conditions and stocking rates. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70-2-5. Precipitation data by Thiessen method using rain gages 1 and 1-A. Precipitation and runoff records began May 1961; part-year amounts not included in averages. For long-time precipitation records, see U.S. Weather Bureau records at Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)														SONORA, TEXAS WATERSHED S-9											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
3	0.0	0.0	0.0	0.0	0.45	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
4	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	1.08	0.0	0.0	0.0												
5	0.0	0.0	0.12E	0.0	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80												
6	0.0	0.0	0.0	0.0	0.44	0.0	0.0	0.0	0.0	0.13E	0.0	0.32	0.0												
7	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
8	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
9	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0												
11	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.55	0.0	0.0	0.0	0.0												
12	0.0	0.0	0.0	0.0	1.61	0.0	0.0	0.0	0.0	2.10	0.0	0.0	0.0												
13	0.0	0.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
15	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.59	0.0	0.0	0.0	0.0	0.0												
16	0.0	0.0	0.0	0.0	0.0	0.12E	0.0	0.0	0.0	0.0	0.15E	0.0	0.0												
17	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.94	0.0	0.0	0.0	0.0												
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34E	0.0	0.0	0.0	0.0												
19	0.0	0.10E	0.0	0.60	0.0	0.0	0.51	0.0	0.0	0.0	0.0	0.0	0.0												
20	0.0	0.12E	0.0	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
21	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.06E	0.0	0.0	0.0	0.0												
22	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0												
23	0.0	0.0	1.02	0.0	0.0	0.0	0.0	0.48	0.0	0.10E	0.0	0.0	0.0												
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.19	0.0	0.0												
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.34	0.0	0.0												
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.70	0.0	0.0												
27	0.0	0.0	0.0	1.02	0.0	0.0	0.93	0.08E	0.0	0.93	0.16E	0.05E	0.0												
28	0.03E	0.0	0.0	0.0	0.0	0.0	0.01E	0.08E	0.0	2.20	0.23E	1.43	0.0												
29	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.05	0.0	0.33E	0.0												
30	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0												
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
TOTAL	0.09	1.17	1.60	4.12	2.43	1.23	2.05	1.81	2.01	6.59	2.76	2.94													
STA AV	0.81	1.21	0.95	2.47	2.88	1.61	1.52	1.22	4.29	1.86	1.43	0.89													

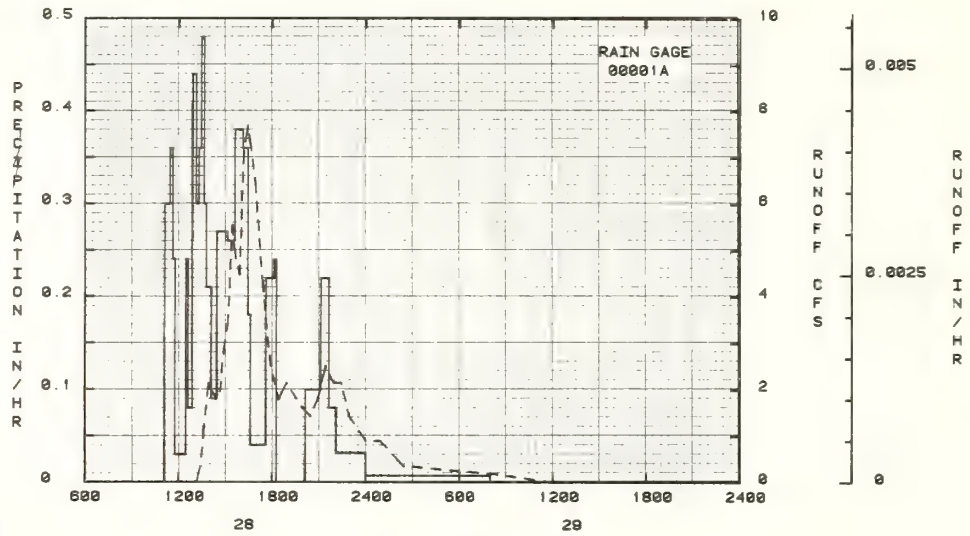
NOTES: For daily air temperature, in the vicinity, see table for Watershed W-14 (70.001). Precipitation values are Thiessen weighted average of rain gages 1 and 1-A. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED S-9												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.202	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.655
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.045	0.0	0.0	0.0	0.0	0.0	0.146	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.072	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.046	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.052	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.038	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.181	0.0	0.352
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.101	0.0	0.250
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0012	0.0082	0.0065	0.0	0.0	0.0	0.0024	0.0461	0.0	0.0728
INCHES	0.0	0.0	0.001	0.003	0.003	0.0	0.0	0.0	0.001	0.019	0.0	0.030
STA AV	0.0	0.0	0.001	0.001	0.008	0.015	0.0	0.0	0.338	0.002	0.0	0.004

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.013417. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED S-9							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 28 - 29, 1969										
10-28	BG 00001A 0.41	0.0	10-28	BG 00001A 1107	0.0	0.0	10-28	1310	0.0	0.0
				1127	0.3000	0.10		1325	0.36	0.0001
				1137	0.3600	0.16		1340	1.25	0.0003
				1147	0.2401	0.20		1355	2.15	0.0006
				1227	0.0300	0.22		1410	1.97	0.0009
WATERSHED CONDITIONS: 0.3% caliche roads; 99.7% rangeland. Rangeland fair condition to moderately overgrazed during a year depending on climatic conditions and stocking rates.				1237	0.2401	0.26		1425	1.79	0.0012
				1252	0.0800	0.28		1440	1.97	0.0015
				1307	0.4400	0.39		1455	2.86	0.0019
				1317	0.3000	0.44		1510	3.40	0.0024
				1327	0.3600	0.50		1525	5.55	0.0032
				1337	0.4800	0.58		1540	4.83	0.0039
				1347	0.3000	0.63		1555	4.47	0.0045
				1407	0.2100	0.70		1610	7.15	0.0055
				1427	0.0900	0.73		1625	7.69	0.0066
				1447	0.2700	0.82		1640	7.15	0.0076
				1507	0.2700	0.91		1655	6.44	0.0085
				1537	0.2600	1.04		1725	4.11	0.0096
				1607	0.3800	1.23		1755	2.50	0.0103
				1627	0.3600	1.35		1825	1.79	0.0108
				1637	0.1800	1.38		1855	2.15	0.0114
				1737	0.0400	1.42		1955	1.61	0.0123
				1807	0.2200	1.53		2025	1.43	0.0127
				1817	0.2400	1.57		2055	1.79	0.0132
				2007	0.0	1.57		2125	2.50	0.0139
				2037	0.1000	1.62		2155	2.15	0.0145
				2107	0.1000	1.67		2225	2.15	0.0151
				2137	0.2200	1.78		2255	1.43	0.0155
				2207	0.0800	1.82		2400	0.89	0.0160
				2400	0.0319	1.88	10-29	55	0.89	0.0165
			10-29	800	0.0075	1.94		225	0.36	0.0168
								825	0.18	0.0174
								1200	0.0	0.0174
								2400	0.0	0.0174

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000559.



EVENT OF OCTOBER 28 - 29, 1969
SONORA, TEXAS WATERSHED S-9

SONORA, TEXAS WATERSHED S-10

LOCATION: Sutton County, Texas; gaging station on flood detention reservoir, 6 mi. NE of Sonora; Lowrey Draw, East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 5392.00 acres 8.42 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED S-10													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	0.10	1.22	1.46	3.98	1.82	0.92	2.38	2.38	3.50	6.68	2.40	2.78	29.61													
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.102	0.0	0.055	0.157													
STA AV	P	0.82	1.18	0.93	2.63	2.98	1.66	1.38	1.33	4.09	1.77	1.58	0.86	21.21													
	Q	0.0	0.0	0.0	0.0	0.031	0.015	0.0	0.0	0.240	0.013	0.0	0.007	0.305													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
		Maximum Discharge Date	Rate	1 Hour Date	Vol.	2 Hours Date	Vol.	6 Hours Date	Vol.	12 Hours Date	Vol.	1 Day Date	Vol.	2 Days Date	Vol.	8 Days Date	Vol.										
1969		10-28	0.032	10-28	0.023	10-28	0.041	10-28	0.094	10-28	0.102	10-28	0.102	10-28	0.102	10-22	0.102										
MAXIMUMS FOR PERIOD OF RECORD																											
		9-23 1964	0.810	9-23 1964	0.720	9-23 1964	0.950	9-23 1964	1.110	9-23 1964	1.150	9-23 1964	1.230	9-23 1964	1.520	9-19 1964	1.930										

NOTES: Watershed conditions: Caliche roads - 0.4%; rangeland - 99.6%. Range condition poor to fair, with moderate to severe overgrazing during a year depending on climatic conditions and stocking rates. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Hisc. Pub. 1262, p. 70.3-6. Thiessen weighted rainfall using rain gages 1, 1-A, 2, 3, 4, 5, 6, and 7. Precipitation and runoff records began May 1961; part-year amounts not included in averages. For long-time precipitation records, see U.S. Weather Bureau records at Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)						SONORA, TEXAS WATERSHED S-10							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.41	0.50	0.0	0.0	0.00E	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	1.08	0.0	0.0	
5	0.0	0.0	0.09E	0.0	0.77	0.0	0.0	0.0	0.0	0.0	0.0	0.58	
6	0.0	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.0	0.01E	0.0	0.30	
7	0.0	0.0	0.0	0.0	0.14E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.00E	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.00E	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	1.34	0.0	0.0	0.0	
12	0.0	0.0	0.0	1.45	0.0	0.0	0.0	0.0	0.0	2.26	0.0	0.0	
13	0.0	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.02E	0.07E	0.0	0.0	0.0	0.0	0.0	0.11E	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	1.34E	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55E	0.0	0.0	0.0	
19	0.0	0.07E	0.0	0.71	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.10E	0.0	0.73	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.12E	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.31E	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.70	0.03E	0.09E	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.09	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25E	0.0	0.0	0.18E	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.61	0.0	
27	0.0	0.0	0.0	0.86	0.0	0.0	1.21	0.35E	0.0	0.78	0.13E	0.08E	
28	0.03E	0.0	0.0	0.0	0.0	0.0	0.07E	0.20E	0.0	2.40	0.28E	1.49	
29	0.01E		0.0	0.0	0.0	0.0	0.0	0.19E	0.0	0.05	0.0	0.33E	
30	0.0		0.07E	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0	
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0	
TOTAL	0.10	1.22	1.46	3.98	1.82	0.92	2.38	2.38	3.50	6.68	2.40	2.78	
STA AV	0.82	1.18	0.93	2.63	2.98	1.66	1.38	1.33	4.09	1.77	1.58	0.86	

NOTES: For daily air temperatures, in the vicinity, see table for Watershed W-14, p. 70.001. Precipitation values are Thiessen weighted average of rain gages 1, 1-A, 2, 3, 4, 5, 6, and 7. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

SONORA, TEXAS WATERSHED S-10													
MEAN DAILY DISCHARGE (cfs)													
1969	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.410
	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.141	0.0	3.383
	29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.623
	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7465	0.0	0.4005
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.102	0.0	0.055
STA AV	0.0	0.0	0.0	0.0	0.0	0.031	0.015	0.0	0.0	0.240	0.013	0.0	0.007

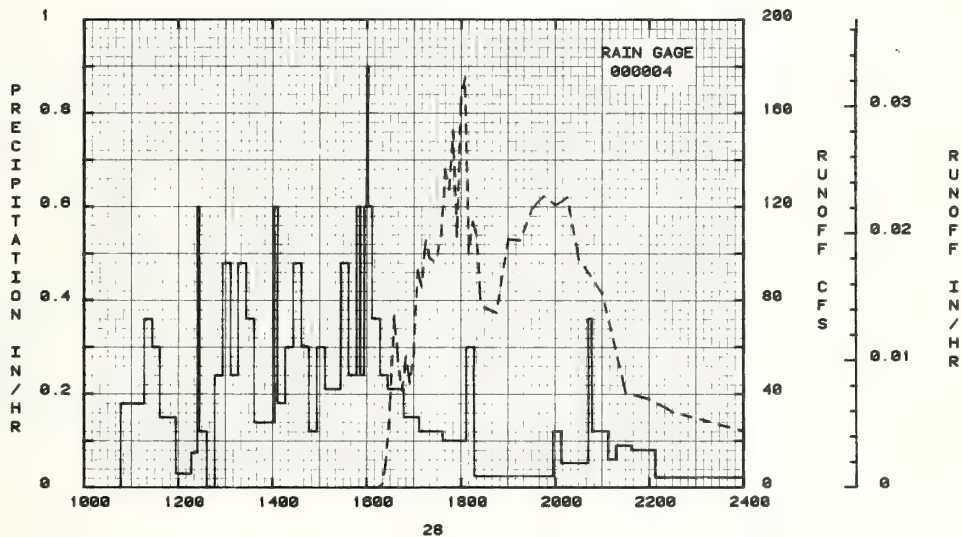
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.004414. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED S-10											
ANTECEDENT CONDITIONS			RAINFALL								
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF OCTOBER 28, 1969											
RG 000004			RG 000004								
10-28	0.22	0.0	10-28	1047	0.0	0.0	10-28	1615	0.0	0.0	
				1107	0.1800	0.06		1620	1.63	0.0	
				1117	0.1800	0.09		1625	13.05	0.0002	
				1127	0.3600	0.15		1630	36.43	0.0008	
				1137	0.3000	0.20		1635	73.40	0.0019	
WATERSHED CONDITIONS: Caliche roads - 0.4%; rangeland - 99.6%. Range condition poor to fair, with moderate to severe overgrazing during a year depending on climatic conditions and stocking rates.				1157	0.1500	0.25		1640	53.83	0.0027	
				1217	0.0300	0.26		1645	41.32	0.0034	
				1225	0.0750	0.27		1650	56.00	0.0042	
				1227	0.6001	0.29		1655	44.58	0.0049	
				1237	0.1200	0.31		1700	57.63	0.0058	
				1247	0.0	0.31		1705	92.97	0.0072	
				1257	0.2400	0.35		1710	85.90	0.0085	
				1307	0.4800	0.43		1715	105.48	0.0102	
				1317	0.2401	0.47		1720	97.87	0.0117	
				1327	0.4799	0.55		1725	96.78	0.0132	
				1337	0.3601	0.61		1730	99.50	0.0148	
				1403	0.1385	0.67		1735	108.20	0.0164	
				1407	0.5999	0.71		1740	135.92	0.0185	
				1417	0.1800	0.74		1745	127.22	0.0205	
				1427	0.3000	0.79		1750	152.78	0.0228	
				1437	0.4800	0.87		1755	107.11	0.0244	
				1447	0.3000	0.92		1800	166.91	0.0270	
				1457	0.1199	0.94		1805	175.07	0.0296	
				1507	0.3000	0.99		1810	100.04	0.0311	
				1527	0.2100	1.06		1815	113.63	0.0329	
				1537	0.4800	1.14		1820	107.65	0.0345	
				1547	0.2400	1.18		1825	80.47	0.0357	
				1552	0.6000	1.23		1830	76.66	0.0369	
				1557	0.2400	1.25		1845	74.49	0.0403	
				1600	0.6000	1.28		1900	106.02	0.0452	
				1602	0.9002	1.31		1915	105.48	0.0501	
				1607	0.6001	1.36		1930	119.07	0.0556	
				1617	0.3600	1.42		1945	124.51	0.0613	
				1627	0.2400	1.46		2000	120.70	0.0669	
				1647	0.2100	1.53		2015	123.96	0.0726	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000184.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED S-10							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 28, 1969 (CONTINUED)										
10-28	1707	0.1500	1.58	10-28	2030	97.32	0.0771			
	1737	0.1200	1.64		2045	90.25	0.0812			
	1807	0.1000	1.69		2100	82.64	0.0850			
	1817	0.3000	1.74		2130	40.23	0.0887			
	1957	0.0240	1.78		2200	37.51	0.0922			
	2007	0.1199	1.80		2230	32.08	0.0952			
	2042	0.0514	1.83		2330	26.64	0.1001			
	2047	0.3602	1.86		2400	23.92	0.1023			
	2107	0.1200	1.90							
	2117	0.0600	1.91							
	2137	0.0900	1.94							
	2207	0.0800	1.98							
	2400	0.0212	2.02							

NOTES: To convert runoff in CPS to IN/HR, multiply by 0.000184.



EVENT OF OCTOBER 28, 1969

SONORA, TEXAS WATERSHED S-10

SONORA, TEXAS WATERSHED S-11

LOCATION: Sutton County, Texas; gaging station on flood detention reservoir, 4 mi. NE of Sonora; Lowrey Draw, East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 10787.00 acres 16.85 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED S-11											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	0.11	1.26	1.39	3.91	1.77	1.04	2.60	2.86	3.82	6.62	2.57	2.75	30.70											
	Q	0.0	0.001	0.001	0.006	0.003	0.0	0.0	0.004	0.001	0.494	0.006	0.090	0.607											
STA AV	P	0.84	1.19	0.88	2.83	3.31	1.61	1.72	1.42	4.05	1.73	1.55	0.85	21.98											
	Q	0.0	0.000	0.000	0.025	0.121	0.008	0.0	0.000	0.164	0.055	0.001	0.010	0.384											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																	
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days									
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		10-28	0.095	10-28	0.077	10-28	0.146	10-28	0.306	10-28	0.371	10-28	0.393	10-27	0.393	10-21	0.393								
MAXIMUMS FOR PERIOD OF RECORD																									
		9-23	0.390	9-23	0.310	9-23	0.550	9-23	0.770	9-23	0.780	9-23	0.780	9-23	0.910	9-19	1.250								
		1964		1964		1964		1964		1964		1964		1964		1964									

NOTES: Watershed conditions: Caliche roads - 0.4%; rangeland - 99.6%. Range condition poor to fair; moderately to severely overgrazed during a year depending on climatic conditions and stocking rates. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.4-8. Precipitation and runoff records began May 1961; part-year amounts not included in averages. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)														SONORA, TEXAS WATERSHED S-11											
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
	1	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	3	0.0	0.0	0.0	0.0	0.41	0.61	0.0	0.0	0.0	0.0	0.0	0.0												
	4	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	1.09	0.0	0.0												
	5	0.0	0.0	0.09E	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.55												
	6	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.32												
	7	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	8	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	9	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0												
	11	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	1.46	0.0	0.0	0.0												
	12	0.0	0.0	0.0	1.41	0.0	0.0	0.0	0.0	2.05	0.0	0.0	0.0												
	13	0.0	1.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	15	0.0	0.0	0.37	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0												
	16	0.0	0.0	0.0	0.04E	0.07E	0.0	0.0	0.0	0.0	0.0	0.12E	0.0												
	17	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	1.31	0.0	0.0	0.0												
	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0												
	19	0.0	0.08	0.0	0.78	0.0	0.0	0.74	0.0	0.0	0.0	0.0	0.0												
	20	0.0	0.11	0.0	0.73	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0												
	21	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.0	0.07E	0.0	0.0	0.0												
	22	0.0	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.0												
	23	0.0	0.0	0.86	0.0	0.0	0.0	0.0	0.85	0.07E	0.11E	0.0	0.0												
	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.26	0.0												
	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.15E	0.0												
	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.62	0.0												
	27	0.0	0.0	0.0	0.78	0.0	0.0	1.13	0.56	0.0	0.70	0.13E	0.10E												
	28	0.04E	0.0	0.0	0.0	0.0	0.0	0.09E	0.25	0.0	2.61	0.29	1.51												
	29	0.02E		0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.06	0.0	0.27S												
	30	0.0		0.07E	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0												
	31	0.0		0.0		0.0		0.0	0.0		0.0		0.0												
	TOTAL	0.11	1.26	1.39	3.91	1.77	1.04	2.60	2.86	3.82	6.62	2.57	2.75												
	STA AV	0.84	1.19	0.88	2.83	3.31	1.61	1.72	1.42	4.05	1.73	1.55	0.85												

NOTES: For daily air temperatures, in the vicinity, see table for Watershed W-14, p. 70.001. Precipitation values are Thiessen weighted average of rain gages 5, 6, 7, 8, 9, 10, and 11. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED S-11												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	1.02	0.0	0.0	0.0	0.0	0.0	0.0	0.63
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.0	0.0	0.0
12	0.0	0.0	0.0	1.26	0.0	0.0	0.0	0.0	0.0	45.69	0.0	0.0
13	0.0	0.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.54	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.0
27	0.0	0.0	0.0	0.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	160.43	1.06	20.04
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.0	17.77	0.0	20.09
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0200	0.0194	0.0973	0.0458	0.0	0.0	0.0559	0.0191	7.2222	0.0846	1.3168
INCHES	0.0	0.001	0.001	0.006	0.003	0.0	0.0	0.004	0.001	0.494	0.006	0.090
STA AV	0.0	0.000	0.000	0.025	0.121	0.008	0.0	0.000	0.164	0.055	0.001	0.010

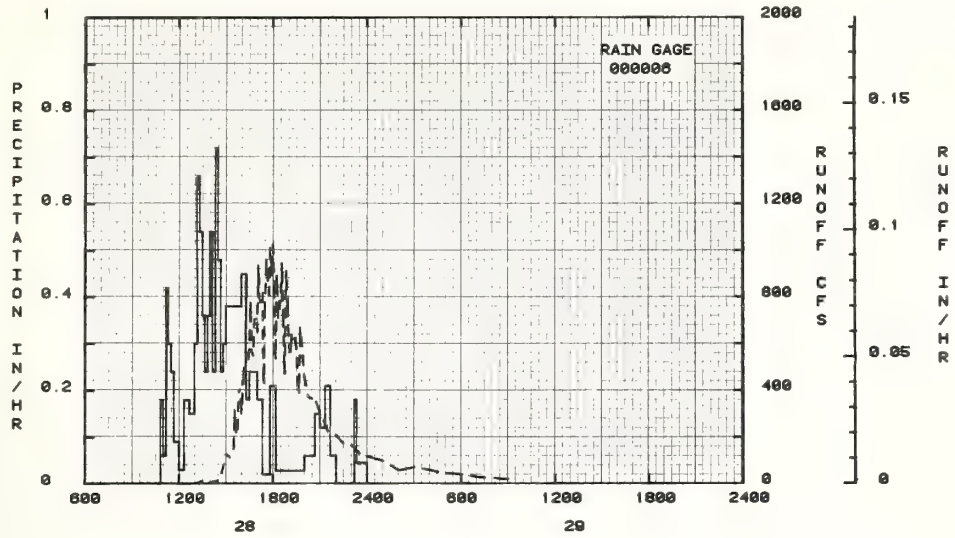
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.002206. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED S-11												
ANTECEDENT CONDITIONS			RAINFALL									
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Runoff	Date	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)		(inches)	
EVENT OF OCTOBER 28 - 29, 1969												
10-28	RG 000006 0.21	0.0	10-28	RG 000006 1050	0.0	0.0	10-28	1300	0.0	0.0		
				1100	0.1800	0.03		1330	13.05	0.0006		
				1110	0.0601	0.04		1400	6.53	0.0009		
				1120	0.4200	0.11		1430	14.14	0.0016		
				1130	0.3000	0.16		1445	46.77	0.0027		
WATERSHED CONDITIONS: Caliche roads - 0.4%; rangeland - 99.6%. Range condition poor to fair; moderately to severely overgrazed during a year depending on climatic conditions and stocking rates.				1140	0.2401	0.20		1500	127.26	0.0056		
				1200	0.0900	0.23		1515	113.12	0.0082		
				1220	0.0300	0.24		1530	153.36	0.0117		
				1240	0.1800	0.30		1535	313.25	0.0141		
				1300	0.1500	0.35		1540	219.71	0.0158		
				1310	0.3000	0.40		1545	232.76	0.0176		
				1320	0.6600	0.51		1550	395.92	0.0206		
				1330	0.5400	0.60		1555	404.62	0.0237		
				1340	0.3600	0.66		1600	302.38	0.0261		
				1350	0.2401	0.70		1605	386.13	0.0290		
				1400	0.3600	0.76		1610	498.16	0.0328		
				1410	0.5400	0.85		1615	513.39	0.0369		
				1420	0.2400	0.89		1620	555.81	0.0411		
				1430	0.7201	1.01		1625	531.88	0.0451		
				1440	0.4800	1.09		1630	576.48	0.0497		
				1450	0.2400	1.13		1635	774.44	0.0555		
				1500	0.3000	1.18		1640	565.60	0.0598		
				1530	0.3800	1.37		1645	548.20	0.0641		
				1600	0.3800	1.56		1650	704.82	0.0694		
				1620	0.4500	1.71		1655	707.00	0.0747		
				1630	0.1800	1.74		1700	651.52	0.0798		
				1700	0.2400	1.86		1705	935.41	0.0869		
				1720	0.1800	1.92		1710	776.61	0.0928		
				1750	0.0200	1.93		1715	785.31	0.0990		
				1810	0.2100	2.00		1720	819.03	0.1052		
				2000	0.0273	2.05		1725	432.90	0.1085		
				2040	0.0600	2.09		1730	776.61	0.1146		
				2100	0.1500	2.14		1735	959.34	0.1218		
				2120	0.1200	2.18		1740	869.06	0.1284		
				2140	0.2100	2.25		1745	804.89	0.1348		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000092.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED S-11					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF		
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	Mo-Day	of Day	(cfs)
Acc. (inches)								
EVENT OF OCTOBER 28 - 29, 1969 (CONTINUED)								
10-28	2200	0.0600	2.27	10-28	1750	1011.55	0.1424	
	2310	0.0	2.27		1756	894.08	0.1504	
	2320	0.1800	2.30		1800	1027.86	0.1570	
	2400	0.0450	2.33		1805	836.43	0.1633	
					1810	537.32	0.1674	
					1815	891.91	0.1744	
					1820	711.35	0.1798	
					1825	783.14	0.1857	
					1830	782.05	0.1919	
					1835	945.20	0.1990	
					1840	672.19	0.2041	
					1845	472.06	0.2078	
					1850	813.66	0.2147	
					1855	759.21	0.2204	
					1900	635.21	0.2254	
					1905	563.42	0.2296	
					1910	638.47	0.2344	
					1915	617.81	0.2393	
					1920	624.33	0.2440	
					1925	625.42	0.2487	
					1930	576.48	0.2533	
					1935	449.22	0.2567	
					1940	390.48	0.2596	
					1945	667.84	0.2649	
					2000	459.00	0.2754	
					2015	371.99	0.2839	
					2030	364.37	0.2923	
					2045	349.15	0.3003	
					2100	307.81	0.3074	
					2130	224.06	0.3177	
					2200	206.66	0.3272	
					2230	170.77	0.3350	
					2300	166.42	0.3426	
					2330	129.43	0.3485	
					2400	117.47	0.3539	
					10-29	100	97.89	0.3629
						200	57.65	0.3682
						300	71.79	0.3748
						430	50.03	0.3817
						600	39.16	0.3871
						730	25.02	0.3906
						900	18.49	0.3932

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000092.



EVENT OF OCTOBER 28 - 29, 1969

SONORA, TEXAS WATERSHED S-11

SONORA, TEXAS WATERSHED S-12

LOCATION: Sutton County, Texas; gaging station on flood detention reservoir, 2 mi. NE of Sonora; Lowrey Draw, East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 2801.00 acres 4.38 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED S-12																			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																			
1969	P	0.12	1.30	1.45	4.83	2.39	0.53	3.26	2.20	2.70	7.68	2.74	2.42	31.63																			
	Q	0.0	0.0	0.0	0.0	0.034	0.0	0.0	0.0	0.0	0.830	0.0	0.264	1.128																			
STA AV	P	0.79	1.20	0.85	2.99	3.39	1.34	1.90	1.37	3.86	1.96	1.56	0.81	22.04																			
	Q	0.0	0.0	0.0	0.073	0.237	0.0	0.015	0.0	0.202	0.104	0.0	0.033	0.663																			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.																
1969		10-28	0.323	10-28	0.225	10-28	0.410	10-28	0.708	10-28	0.799	10-28	0.813	10-28	0.828	10-28	0.828																
MAXIMUMS FOR PERIOD OF RECORD																																	
		9-23	1.200	9-23	0.790	9-23	1.000	9-23	1.080	9-23	1.090	9-23	1.090	9-23	1.150	9-15	1.620																
		1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964																

NOTES: Watershed conditions: Paved roads - 0.2% of the area; rangeland - 99.8%. Range conditions poor to fair, with moderate to severe overgrazing during a year depending on climatic conditions and stocking rates. For map of watershed see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.5-7. Thiessen weighted rainfall using rain gages 8, 10, 11, 12, and 13. Precipitation and runoff records began May 1961; part-year amounts not included in averages. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14, approximately 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)													SONORA, TEXAS WATERSHED S-12												
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
	1	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	3	0.0	0.0	0.0	0.0	0.79	0.07E	0.0	0.0	0.02E	0.0	0.0	0.0												
	4	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	0.0	1.08	0.0	0.0												
	5	0.0	0.0	0.10E	0.0	0.96	0.0	0.0	0.0	0.0	0.0	0.0	0.21												
	6	0.0	0.0	0.0	0.0	0.16E	0.0	0.0	0.0	0.0	0.04E	0.0	0.28												
	7	0.0	0.0	0.0	0.0	0.15E	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	8	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.0	0.12E	0.0	0.0	0.0												
	9	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	10	0.0	0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.08	0.0	0.0	0.0												
	11	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.0	1.06	0.0	0.0	0.0												
	12	0.0	0.0	0.0	1.68	0.0	0.0	0.0	0.0	2.38	0.0	0.0	0.0												
	13	0.0	1.15	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0												
	14	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0												
	15	0.0	0.0	0.38	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0												
	16	0.0	0.0	0.0	0.41E	0.11E	0.0	0.0	0.0	0.0	0.0	0.16E	0.0												
	17	0.0	0.0	0.0	0.0	0.0	0.12E	0.0	0.0	0.46E	0.0	0.0	0.0												
	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93	0.0	0.0	0.0												
	19	0.0	0.08E	0.0	0.75	0.0	0.0	0.22E	0.0	0.0	0.0	0.0	0.0												
	20	0.0	0.08E	0.0	0.66	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.0												
	21	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.0	0.02E	0.0	0.0	0.0												
	22	0.0	0.0	0.0	0.0	0.0	0.0	0.66E	0.0	0.0	0.0	0.0	0.0												
	23	0.0	0.0	0.89	0.0	0.0	0.0	0.04	0.04E	0.01E	0.06E	0.0	0.0												
	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11E	0.0	0.0	0.91	0.0												
	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.18E	0.0												
	26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20E	0.0	0.0	0.88	0.0												
	27	0.0E	0.0	0.0	1.06	0.0	0.0	1.40	0.09E	0.0	0.85	0.19E	0.10E												
	28	0.04E	0.0	0.0	0.0	0.0	0.0	0.41	0.80	0.0	3.22	0.43	1.48												
	29	0.02E		0.0	0.0	0.0	0.0	0.0	0.18E	0.0	0.05	0.0	0.355												
	30	0.0		0.07E	0.0	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0												
	31	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	TOTAL	0.12	1.30	1.45	4.83	2.39	0.53	3.26	2.20	2.70	7.68	2.74	2.42												
	STA AV	0.79	1.20	0.85	2.99	3.39	1.34	1.90	1.37	3.86	1.96	1.56	0.81												

NOTES: For daily air temperature, in the vicinity, see table for Watershed W-14, p. 70.001. Precipitation values are Thiessen weighted average of rain gages 8, 10, 11, 12, and 13. Records began May 1961, part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED S-12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	4.058	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.290	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.356	0.0	15.246
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.032	0.0	15.767
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.1309	0.0	0.0	0.0	0.0	3.1509	0.0	1.0004
INCHES	0.0	0.0	0.0	0.0	0.034	0.0	0.0	0.0	0.0	0.830	0.0	0.264
STA AV	0.0	0.0	0.0	0.073	0.237	0.0	0.015	0.0	0.202	0.104	0.0	0.033

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.008498. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED S-12										
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 28 - 29, 1969										
RG 000012			RG 000012							
10-28	0.20	0.0	10-28	1040	0.0	0.0	10-28	1415	0.0	0.0
				1050	0.3000	0.05		1420	0.56	0.0
				1100	0.4800	0.13		1425	11.86	0.0003
				1110	0.2999	0.18		1430	22.03	0.0010
				1130	0.2700	0.27		1445	15.53	0.0024
WATERSHED CONDITIONS: Paved roads - 0.2% of the area; rangeland - 99.8%. Range conditions poor to fair, with moderate to severe overgrazing during a year depending on climatic conditions and stocking rates.				1200	0.0600	0.30		1500	4.24	0.0028
				1210	0.0	0.30		1515	7.06	0.0034
				1230	0.1200	0.34		1530	7.63	0.0041
				1240	0.1200	0.36		1545	18.92	0.0058
				1256	0.0750	0.38		1550	57.05	0.0075
				1300	0.4500	0.41		1555	194.88	0.0132
				1305	0.4799	0.45		1600	616.55	0.0320
				1310	1.3200	0.56		1605	668.52	0.0514
				1316	1.6000	0.72		1610	566.00	0.0678
				1330	0.3429	0.80		1615	677.56	0.0884
				1334	0.2998	0.82		1620	516.57	0.1034
				1340	1.0001	0.92		1625	911.13	0.1299
				1345	0.8401	0.99		1630	589.16	0.1478
				1350	1.3200	1.10		1635	503.86	0.1624
				1400	0.2400	1.14		1640	794.49	0.1855
				1404	0.4500	1.17		1645	874.42	0.2121
				1410	1.7000	1.34		1650	622.20	0.2302
				1415	1.0799	1.43		1655	264.64	0.2379
				1420	0.7202	1.49		1700	284.98	0.2466
				1430	0.3600	1.55		1705	571.65	0.2632
				1440	0.4200	1.62		1710	448.79	0.2762
				1450	0.4800	1.70		1715	533.52	0.2824
				1500	0.3600	1.76		1720	704.14	0.3129
				1520	0.3300	1.87		1725	470.53	0.3266
				1540	0.4500	2.02		1730	618.53	0.3454
				1600	0.4500	2.17		1735	614.58	0.3632
				1610	0.3000	2.22		1740	515.73	0.3782
				1630	0.1500	2.27		1745	474.77	0.3926
				1640	0.2999	2.32		1750	460.37	0.4060
				1650	0.3000	2.37		1755	577.86	0.4228

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.000354.

1969	SELECTED RUNOFF EVENT					SONORA, TEXAS WATERSHED S-12				
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF OCTOBER 28 - 29, 1969 (CONTINUED)										
10-28			1710		0.1200	2.41	10-28	1800	380.44	0.4344
			1720		0.0600	2.42		1805	515.44	0.4494
			1740		0.2400	2.50		1810	414.33	0.4614
			1800		0.2100	2.57		1815	489.74	0.4763
			2000		0.0200	2.61		1820	445.96	0.4893
			2030		0.0600	2.64		1825	355.58	0.4996
			2100		0.0800	2.68		1830	380.16	0.5112
			2110		0.1200	2.70		1845	320.84	0.5396
			2120		0.3000	2.75		1900	288.65	0.5651
			2130		0.0600	2.76		1915	234.42	0.5858
			2140		0.1200	2.78		1930	194.88	0.6031
			2200		0.0900	2.81		1945	241.48	0.6245
			2300		0.0100	2.82		2000	230.75	0.6449
			2330		0.0800	2.86		2015	154.77	0.6586
			2400		0.0400	2.88		2030	151.95	0.6721
								2100	122.29	0.6937
								2130	85.58	0.7089
								2230	59.59	0.7300
								2300	49.14	0.7387
								2400	58.75	0.7595
							10-29	30	54.79	0.7692
								130	48.58	0.7864
								200	38.98	0.7933
								300	21.18	0.8008
								400	12.15	0.8051
								500	10.45	0.8088
								600	5.65	0.8108
								700	5.65	0.8128

SONORA, TEXAS WATERSHED S-13

LOCATION: Sutton County, Texas; gaging station on flood detention reservoir, 0.5 mi. SE of Sonora; Lowrey Draw, East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 686.00 acres 1.07 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED S-13															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.14	1.44	1.46	5.18	2.72	0.56	2.39	1.29	1.43	7.96	2.62	2.25	29.43															
	Q	0.0	0.002	0.002	0.012	0.082	0.0	0.007	0.0	0.0	0.643	0.000	0.076	0.823															
STA AV	P	0.86	1.31	0.87	2.99	3.17	1.37	1.54	1.28	3.51	1.92	1.58	0.82	21.23															
	Q	0.0	0.000	0.001	0.091	0.093	0.0	0.001	0.0	0.120	0.080	0.000	0.009	0.395															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval																					
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days													
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		10-28	0.250	10-28	0.165	10-28	0.326	10-28	0.568	10-28	0.631	10-28	0.639	10-27	0.640	10-27	0.640												
MAXIMUMS FOR PERIOD OF RECORD																													
		9-23	0.770	9-23	0.460	9-23	0.600	9-23	0.680	9-23	0.680	9-23	0.680	9-23	0.680	9-23	0.680	9-19	0.850										
		1964		1964		1964		1964		1964		1964		1964		1964		1964											

NOTES: Watershed conditions: Paved roads - 1.5% of the area, rangeland - 98.5%. Range in poor to fair condition, severely overgrazed during a year depending on climatic conditions and stocking rates. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.6-7. Precipitation data by Thiessen method using rain gages 12 and 13. Precipitation and runoff records began May 1961; part-year amounts not included in averages. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)													SONORA, TEXAS WATERSHED S-13												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
3	0.0	0.0	0.0	0.0	0.0	1.01	0.05E	0.0	0.0	0.07E	0.0	0.0													
4	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	1.11	0.0													
5	0.0	0.0	0.10E	0.0	1.25	0.0	0.0	0.0	0.0	0.0	0.0	0.15													
6	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.09E	0.0	0.26													
7	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
8	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.0	0.14E	0.0	0.0													
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
10	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0													
11	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	0.62	0.0	0.0	0.0													
12	0.0	0.0	0.0	1.72	0.0	0.0	0.0	0.0	0.0	2.08	0.0	0.0													
13	0.0	1.22	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0													
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
15	0.0	0.0	0.48	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0													
16	0.0	0.0	0.0	0.26	0.06E	0.0	0.0	0.0	0.0	0.0	0.17E	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01E	0.0	0.0	0.0													
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.0													
19	0.0	0.07E	0.0	0.89	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.0													
20	0.0	0.15E	0.0	0.66	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0													
21	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.0	0.0	0.0	0.0	0.0													
22	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0													
23	0.0	0.0	0.81	0.0	0.0	0.0	0.0	0.05E	0.05E	0.07E	0.0	0.0													
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	0.0	0.76	0.0													
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.17E	0.0													
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07E	0.0	0.0	0.91	0.0													
27	0.0	0.0	0.0	1.21	0.0	0.0	1.25	0.08E	0.0	1.11	0.17E	0.16E													
28	0.04E	0.0	0.0	0.0	0.0	0.0	0.55	0.56	0.0	3.45	0.44	1.43													
29	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.07E	0.0	0.05	0.0	0.25E													
30	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.0	0.0													
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
TOTAL	0.14	1.44	1.46	5.18	2.72	0.56	2.39	1.29	1.43	7.96	2.62	2.25													
STA AV	0.86	1.31	0.87	2.99	3.17	1.37	1.54	1.28	3.51	1.92	1.58	0.82													

NOTES: For daily air temperatures, in the vicinity, see table for W-14 p. 70.001. Precipitation values are Thiessen weighted average of rain gages 12 and 13. Records began May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED S-13												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.064	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	2.303	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.048	0.0	0.0	0.0	0.0	0.0	0.069	0.0	0.0
13	0.0	0.043	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.085	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.057	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004	0.0
27	0.0	0.0	0.0	0.171	0.0	0.0	0.092	0.0	0.0	0.050	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.105	0.0	0.0	16.633	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.772	0.0	2.181
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0015	0.0019	0.0115	0.0764	0.0	0.0064	0.0	0.0	0.5976	0.0001	0.0704
INCHES	0.0	0.002	0.002	0.012	0.082	0.0	0.007	0.0	0.0	0.643	0.000	0.076
STA AV	0.0	0.000	0.001	0.091	0.093	0.0	0.001	0.0	0.120	0.080	0.000	0.009

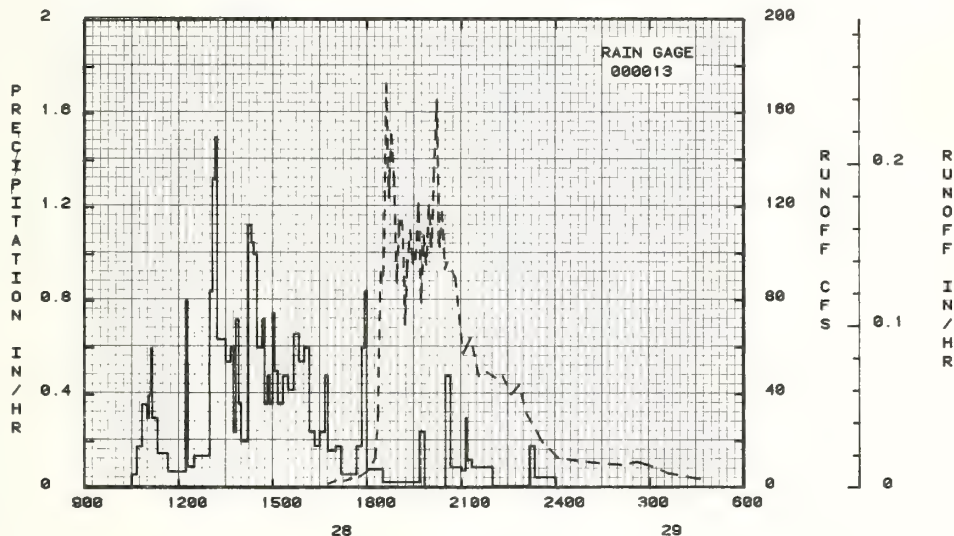
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.034696. Records began in May 1961; part-year amounts not included in averages. STA AV based on 8 yr record period.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED S-13								
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF OCTOBER 28 - 29, 1969											
RG 000013			RG 000013								
10-28	0.29	0.0	10-28	1030	0.0	0.0	10-28	1430	0.0	0.0	
				1040	0.0601	0.01		1500	0.21	0.0002	
				1050	0.1800	0.04		1530	0.07	0.0002	
				1100	0.3600	0.10		1630	0.07	0.0003	
				1104	0.3001	0.12		1645	2.01	0.0010	
WATERSHED CONDITIONS: Paved roads - 1.5% of the area, rangeland - 98.5%. Range in poor to fair condition, severely over- grazed during a year depending on climatic conditions and stocking rates.				1107	0.3998	0.14		1700	3.25	0.0022	
				1110	0.6000	0.17		1715	3.18	0.0034	
				1120	0.3000	0.22		1730	4.22	0.0049	
				1140	0.1500	0.27		1745	4.91	0.0067	
				1214	0.0706	0.31		1800	7.47	0.0094	
				1217	0.8002	0.35		1815	12.87	0.0141	
				1230	0.0923	0.37		1820	31.68	0.0179	
				1300	0.1400	0.44		1825	92.00	0.0288	
				1305	0.8401	0.51		1830	90.75	0.0401	
				1310	1.3200	0.62		1835	173.00	0.0606	
				1314	1.4999	0.72		1840	123.96	0.0753	
				1330	0.6375	0.89		1845	151.14	0.0941	
				1340	0.5401	0.98		1850	132.88	0.1099	
				1345	0.5998	1.03		1855	87.64	0.1203	
				1350	0.2401	1.05		1900	114.13	0.1345	
				1355	0.7200	1.11		1905	114.34	0.1481	
				1400	0.3600	1.14		1910	69.86	0.1564	
	1412	0.2000	1.18		1915	97.39	0.1685				
	1420	1.1250	1.33		1920	110.12	0.1816				
	1424	1.0501	1.40		1925	95.87	0.1930				
	1430	0.9999	1.50		1930	97.81	0.2052				
	1440	0.6000	1.60		1935	121.54	0.2196				
	1445	0.7200	1.66		1940	79.34	0.2290				
	1450	0.3600	1.69		1945	107.84	0.2424				
	1455	0.4801	1.73		1950	95.25	0.2537				
	1500	0.3600	1.76		1955	120.57	0.2680				
	1504	0.7498	1.81		2000	102.93	0.2808				
	1510	0.5000	1.86		2005	136.82	0.2970				
	1520	0.3600	1.92		2010	165.67	0.3166				
	1530	0.4800	2.00		2015	103.00	0.3294				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001446.

1969	SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED S-13						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF OCTOBER 28 - 29, 1969 (CONTINUED)										
10-28	1540	0.4200	2.07	10-28	2020	118.08	0.3434			
	1550	0.6600	2.18	2025	93.52	0.3545				
	1600	0.5400	2.27	2030	96.08	0.3664				
	1610	0.6001	2.37	2045	89.85	0.3989				
	1620	0.2400	2.41	2100	57.48	0.4197				
	1630	0.1800	2.44	2115	64.33	0.4430				
	1640	0.2401	2.48	2130	47.80	0.4603				
	1645	0.4799	2.52	2145	49.66	0.4782				
	1700	0.1600	2.56	2200	47.24	0.4953				
	1710	0.1800	2.59	2215	47.87	0.5126				
	1730	0.0600	2.61	2230	39.91	0.5270				
	1740	0.0601	2.62	2245	43.99	0.5429				
	1750	0.1800	2.65	2300	31.54	0.5543				
	1755	0.5999	2.70	2330	19.44	0.5683				
	1800	0.8400	2.77	2400	12.66	0.5774				
10-29	1830	0.0800	2.81	100	10.86	0.5931				
	1940	0.0257	2.84	200	9.75	0.6072				
	1950	0.2400	2.88	230	11.21	0.6153				
	2030	0.0	2.88	300	9.06	0.6218				
	2040	0.4800	2.96	330	6.16	0.6262				
	2100	0.0900	2.99	430	3.73	0.6316				
	2108	0.0750	3.00							
	2110	0.3004	3.01							
	2120	0.1199	3.03							
	2200	0.0900	3.09							
	2310	0.0086	3.10							
	2320	0.1800	3.13							
	2400	0.0450	3.16							

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.001446.



EVENT OF OCTOBER 28 - 29, 1969

SONORA, TEXAS WATERSHED S-13

SONORA, TEXAS WATERSHED W-1

LOCATION: Edwards County, Texas; 28 mi. (highway) south of Sonora; East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 10.20 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED W-1																			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																			
1969	P	0.12	1.15	1.27	3.92	1.68	4.18	1.88	1.75	3.89	7.32	2.25	1.24	30.65																			
	Q	0.0	0.0	0.0	0.0	0.0	0.458	0.0	0.0	0.016	1.003	0.004	0.0	1.481																			
STA AV	P	1.33	1.59	0.77	3.03	2.58	2.15	2.45	2.16	3.84	2.20	1.47	0.67	24.22																			
	Q	0.113	0.005	0.0	0.261	0.160	0.076	0.016	0.040	0.263	0.167	0.001	0.0	1.102																			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.				
1969		10-28	0.364	10-28	0.241	6- 4	0.340	10-28	0.604	10-28	0.731	10-28	0.797	10-28	0.821	10-22	0.825																
MAXIMUMS FOR PERIOD OF RECORD																																	
		4-30	1.680	4-30	0.990	4-30	1.180	4-30	1.280	4-30	1.300	4-30	1.300	4-29	1.490	9-21	1.570																
		1966		1966		1966		1966		1966		1966		1966		1964																	

NOTES: Watershed conditions: 100% rangeland; fair level of management; stocking rate, 30-35 animal units per section. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.7-7. Precipitation data from rain gage 15. Precipitation and runoff records began October 1963; part-year amounts not included in station averages. For long-time precipitation records, see U.S. Weather records at the Texas Agricultural Experiment Station, Substation No. 14. Watershed is on substation property.

1969					DAILY PRECIPITATION (inches)					SONORA, TEXAS WATERSHED W-1				
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.12	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.22	1.30	0.0	0.0	0.32	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	2.78	0.0	0.0	0.0	1.98	0.0	0.0		
5	0.0	0.0	0.0 E	0.0	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.13		
6	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.25E	0.0	0.31		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0	1.88	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.21	0.0	0.0	0.0	0.0	0.0	1.70	0.0	0.0		
13	0.0	0.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.02	0.0	0.0	0.0	0.10E	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.58	0.21	0.0	0.0	0.0	0.0	0.0	0.14E	0.0		
17	0.0	0.0	0.0	0.16	0.08E	0.0	0.0	0.0	0.07E	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.08E	0.0		
19	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.09E	0.0	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.0	1.45	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.0	0.52	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.86	0.0	0.0	0.63	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	0.13E	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.63	0.0		
27	0.0	0.0	0.0	0.91	0.0	0.0	0.15	0.0	0.0	1.27	0.22E	0.06E		
28	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.0	2.03	0.42	0.27		
29	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.09	0.0	0.47S		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	0.12	1.15	1.27	3.92	1.68	4.18	1.88	1.75	3.89	7.32	2.25	1.24		
STA AV	1.33	1.59	0.77	3.03	2.58	2.15	2.45	2.16	3.84	2.20	1.47	0.67		

NOTES: For daily air temperatures, in the vicinity, see table for W-14, p. 70.001. Precipitation data obtained from rain gage 15. Records began October 1963; part-year amounts not included in averages. STA AV based on 6 yr record period

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED W-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.196	0.0	0.0	0.0	0.004	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.007	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.072	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.295	0.001	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.057	0.0 T	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0065	0.0	0.0	0.0002	0.0139	0.0001	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.458	0.0	0.0	0.016	1.003	0.004	0.0
STA AV	0.113	0.005	0.0	0.261	0.160	0.076	0.016	0.040	0.263	0.167	0.001	0.0

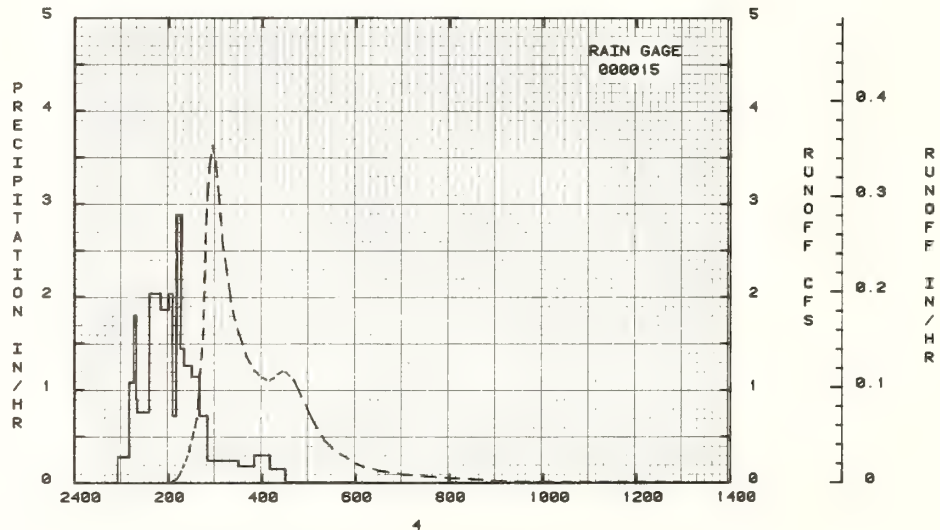
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 2.333500. Records began October 1963; part-year amounts not included in averages. STA AV based on 6 yr record period.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-1							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 4, 1969										
RG 000015			RG 000015							
6- 4	0.0	0.0	6- 4	55	0.0	0.0	6- 4	200	0.0	0.0
				110	0.2800	0.07		202	0.0	0.0
				115	1.0800	0.16		204	0.010	0.0
				118	1.8000	0.25		206	0.030	0.0001
				120	0.9000	0.28		210	0.040	0.0003
WATERSHED CONDITIONS: 100% rangeland; fair level of management; stocking rate, 30-35 animal units per section.				135	0.7600	0.47		212	0.070	0.0005
				140	2.0400	0.64		214	0.090	0.0008
				150	2.0400	0.98		216	0.130	0.0012
				200	1.8600	1.29		218	0.170	0.0017
				205	2.0400	1.46		220	0.200	0.0023
				210	0.7200	1.52		222	0.240	0.0030
				215	2.8800	1.76		224	0.290	0.0039
				220	1.4400	1.88		226	0.340	0.0049
				230	1.2600	2.09		228	0.410	0.0061
				240	1.1400	2.28		230	0.470	0.0075
				250	0.7200	2.40		232	0.550	0.0092
				300	0.2400	2.44		234	0.600	0.0111
				330	0.2400	2.56		236	0.700	0.0132
				350	0.1800	2.62		238	0.870	0.0158
				410	0.3000	2.72		240	1.130	0.0190
				430	0.1500	2.77		242	1.350	0.0230
				600	0.0067	2.78		244	1.560	0.0277
				246	2.180	0.0338				
				248	2.840	0.0419				
				250	3.130	0.0516				
				252	3.360	0.0621				
				254	3.530	0.0733				
				256	3.630	0.0849				
				258	3.550	0.0966				
				300	3.460	0.1080				
				302	3.290	0.1189				
				304	3.100	0.1293				
				306	2.870	0.1389				
				310	2.510	0.1563				
				315	2.240	0.1756				

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.097229.

1969	SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED #1-1						
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
No-Day	(inches)	(inches)	No-Day	of Day	(in/hr)	(inches)	No-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 4, 1969 (CONTINUED)										
							6- 4	320	1.950	0.1926
								325	1.750	0.2076
								330	1.600	0.2212
								335	1.490	0.2337
								340	1.350	0.2452
								345	1.280	0.2559
								350	1.210	0.2660
								355	1.160	0.2756
								400	1.130	0.2849
								405	1.110	0.2940
								410	1.110	0.3030
								415	1.130	0.3121
								420	1.170	0.3214
								425	1.200	0.3310
								430	1.190	0.3407
								435	1.150	0.3502
								440	1.110	0.3594
								450	0.930	0.3759
								500	0.750	0.3856
								510	0.590	0.4005
								520	0.450	0.4090
								530	0.370	0.4157
								540	0.310	0.4212
								550	0.260	0.4258
								600	0.210	0.4296
								610	0.170	0.4327
								630	0.130	0.4375
								700	0.090	0.4428
								730	0.070	0.4466
								800	0.050	0.4494
								830	0.040	0.4514
								900	0.020	0.4528
								930	0.010	0.4537
								1000	0.010	0.4543
								1200	0.010	0.4559
								2000	0.0	0.4582

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.097229.



EVENT OF JUNE 4, 1969
SONORA, TEXAS WATERSHED #1

SONORA, TEXAS WATERSHED W-2

LOCATION: Edwards County, Texas; 28 mi. (highway) south of Sonora; East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 8.60 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED W-2									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	0.12	1.00	1.08	3.62	1.66	3.64	1.52	1.68	3.37	6.77	2.19	1.23	27.88									
	Q	0.0	0.0	0.0	0.0	0.0	0.346	0.0	0.0	0.0	1.280	0.012	0.0	1.638									
STA AV	P	0.86	1.44	0.70	3.03	2.48	2.10	2.20	2.03	2.86	2.14	1.58	0.63	22.04									
	Q	0.0	0.002	0.0	0.433	0.204	0.069	0.0	0.042	0.0	0.256	0.002	0.0	1.008									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.								
1969		10-28	0.396	10-28	0.296	10-28	0.431	10-28	0.780	10-28	1.010	10-28	1.094	10-28	1.107								
MAXIMUMS FOR PERIOD OF RECORD																							
		4-30	1.550	4-30	1.250	4-30	1.710	4-30	1.960	4-30	2.000	4-30	2.000	4-29	2.140								
		1966	1966	1966	1966	1966	1966	1966	1966	1966	1966	1966	1966	1966	1966								

NOTES: Watershed conditions: 100% rangeland; low good level of management; stocking rate, 32 animal units per section. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.8-6. Precipitation data from rain gage 16. Precipitation and runoff records began January 1965. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14. Watershed is on substation property.

1969 DAILY PRECIPITATION (inches)													SONORA, TEXAS WATERSHED W-2	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.96	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.23	1.17	0.0	0.0	0.27	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	2.40	0.0	0.0	0.0	1.90	0.0	0.0		
5	0.0	0.0	0.02E	0.0	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.13		
6	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.14E	0.0	0.30		
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	1.73	0.0	0.0	0.0		
12	0.0	0.0	0.0	1.16	0.0	0.0	0.0	0.0	0.0	1.78	0.0	0.0		
13	0.0	0.84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.03E	0.0	0.0	0.0	0.07E	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.59	0.22	0.0	0.0	0.0	0.0	0.0	0.12E	0.0		
17	0.0	0.0	0.0	0.16	0.09E	0.0	0.0	0.0	0.03E	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.0	0.09E	0.0		
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.09E	0.0	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.0	1.27	0.0	0.0	0.0	0.0	0.0		
23	0.0	0.0	0.42	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.60	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.13E	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.60	0.0		
27	0.0	0.0	0.0	0.76	0.0	0.0	0.06E	0.0	0.0	1.10	0.22E	0.06E		
28	0.04E	0.0	0.0	0.0	0.0	0.0	0.06E	0.39	0.0	1.77	0.43	0.28		
29	0.04E		0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.08	0.0	0.46E		
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	0.0		
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0		
TOTAL	0.12	1.00	1.08	3.62	1.66	3.64	1.52	1.68	3.37	6.77	2.19	1.23		
STA AV	0.86	1.44	0.70	3.03	2.48	2.10	2.20	2.03	2.86	2.14	1.58	0.63		

NOTES: For daily air temperatures, in the vicinity, see table for W-14, p. 70.001. Precipitation data obtained from rain gage 16. Records began January 1965. STA AV based on 5 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED W-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.125	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.062	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.334	0.004	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.066	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0042	0.0	0.0	0.0	0.0149	0.0001	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.346	0.0	0.0	0.0	1.280	0.012	0.0
STA AV	0.0	0.002	0.0	0.433	0.204	0.069	0.0	0.042	0.0	0.256	0.002	0.0

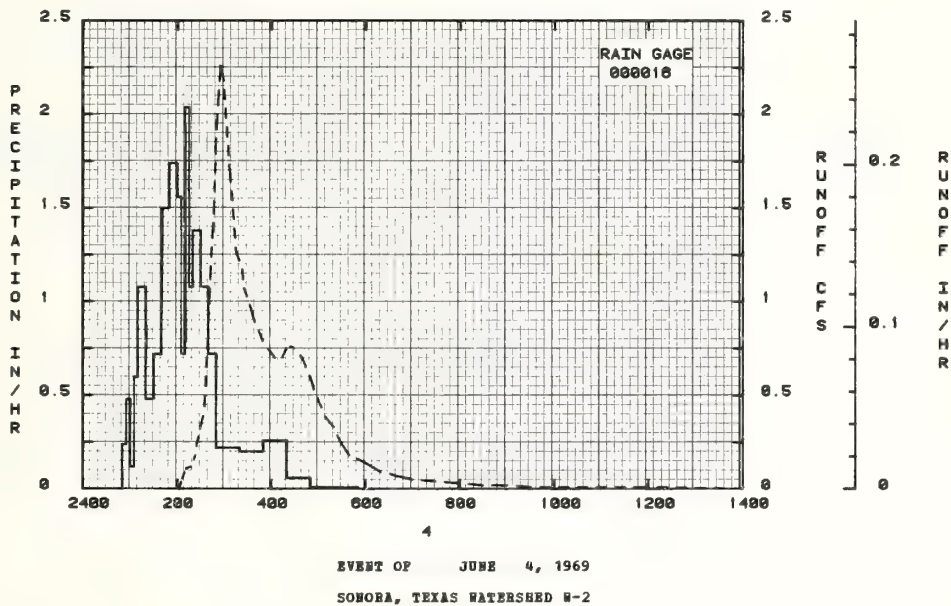
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 2.767634. Records began January 1965. STA AV based on 5 yr record period.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-2									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JUNE 4, 1969												
RG 000016			RG 000016									
6- 4	0.0	0.0	6- 4	50	0.0	0.0	6- 4	200	0.0	0.0		
				55	0.2400	0.02		201	0.0	0.0		
				103	0.4800	0.06		203	0.010	0.0		
				105	0.1200	0.07		205	0.040	0.0001		
				110	0.6000	0.12		207	0.060	0.0003		
WATERSHED CONDITIONS:				120	1.0800	0.30		209	0.090	0.0006		
100% rangeland; low good				130	0.4800	0.38		211	0.110	0.0010		
level of management;				140	0.7200	0.50		217	0.120	0.0023		
stocking rate, 32 animal				150	1.5000	0.75		221	0.160	0.0034		
units per section.				200	1.7400	1.04		223	0.180	0.0041		
				205	1.5600	1.17		225	0.240	0.0049		
				210	0.7200	1.23		227	0.280	0.0059		
				215	2.0400	1.40		229	0.320	0.0070		
				220	1.0800	1.49		233	0.390	0.0097		
				230	1.3800	1.72		235	0.450	0.0113		
				240	1.0800	1.90		237	0.600	0.0133		
				250	0.7200	2.02		239	0.790	0.0160		
				320	0.2200	2.13		241	1.020	0.0195		
				350	0.2000	2.23		243	1.190	0.0238		
				420	0.2600	2.36		245	1.370	0.0287		
				450	0.0600	2.39		247	1.540	0.0343		
				550	0.0100	2.40		249	1.820	0.0408		
								251	2.000	0.0481		
								253	2.130	0.0561		
								255	2.260	0.0645		
								257	2.220	0.0732		
								259	2.180	0.0816		
								303	1.930	0.0974		
								307	1.690	0.1113		
								311	1.490	0.1235		
								315	1.270	0.1341		
								319	1.220	0.1437		
								323	1.170	0.1529		
								325	1.070	0.1572		
								329	1.030	0.1653		

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.115318.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-2							
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 4, 1969 (CONTINUED)										
							6- 4	334	0.960	0.1749
								339	0.890	0.1838
								349	0.790	0.2000
								359	0.730	0.2146
								404	0.700	0.2215
								414	0.700	0.2350
								419	0.750	0.2420
								424	0.760	0.2493
								429	0.750	0.2566
								439	0.700	0.2705
								444	0.650	0.2770
								449	0.600	0.2830
								454	0.530	0.2884
								459	0.480	0.2933
								509	0.380	0.3016
								519	0.330	0.3084
								529	0.240	0.3138
								539	0.180	0.3178
								559	0.140	0.3239
								619	0.090	0.3282
								639	0.070	0.3311
								659	0.050	0.3333
								729	0.040	0.3359
								759	0.030	0.3379
								829	0.020	0.3394
								900	0.020	0.3405
								930	0.010	0.3413
								1200	0.010	0.3439
								2000	0.0	0.3467

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.115318.



SONORA, TEXAS WATERSHED W-3

LOCATION: Edwards County, Texas; 28 mi. (highway) south of Sonora; East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 6.70 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED W-3													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual													
1969	P	0.12	1.16	0.85	3.86	1.66	3.73	2.03	2.23	2.86	7.58	2.28	1.12	29.48													
	Q	0.0	0.0	0.0	0.003	0.0	0.002	0.0	0.0	0.0	0.076	0.0	0.0	0.081													
STA AV	P	0.85	1.54	0.75	3.24	2.87	2.15	2.07	2.34	2.76	2.52	1.61	0.64	23.34													
	Q	0.0	0.0	0.0	0.253	0.012	0.000	0.0	0.0	0.0	0.015	0.0	0.0	0.280													
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																											
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date																			
1969	10-28	0.043	10-28	0.037	10-28	0.055	10-28	0.069	10-28	0.074	10-28	0.075	10-27	0.075	10-21	0.075											
MAXIMUMS FOR PERIOD OF RECORD																											
	4-30 1966	1.670	4-30 1966	1.020	4-30 1966	1.220	4-30 1966	1.260	4-30 1966	1.260	4-30 1966	1.260	4-30 1966	1.260	4-30 1966	1.260											

NOTES: Watershed conditions: 100% rangeland; range in fair condition. Precipitation data from rain gage 17. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.9-8. Precipitation and runoff records began January 1965. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)						SONORA, TEXAS WATERSHED W-3							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.22	0.85	0.0	0.0	0.18	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	2.53	0.0	0.0	0.0	2.00	0.0	0.0	
5	0.0	0.0	0.04E	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	
6	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	0.25E	0.0	0.19E	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	1.48	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	1.18	0.0	0.0	0.0	0.0	2.27	0.0	0.0	
13	0.0	1.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.0	0.74	0.25	0.0	0.0	0.0	0.0	0.11E	0.0	
17	0.0	0.0	0.0	0.0	0.14	0.09E	0.0	0.0	0.27	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13E	0.0	0.09E	0.0	
19	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.10E	0.0	0.0	0.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.46	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.64	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.13E	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.64	0.0	
27	0.0	0.0	0.0	0.0	0.72	0.0	0.90	0.0	0.0	1.15	0.22E	0.06E	
28	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.99	0.0	1.83	0.45	0.30	
29	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.08	0.0	0.49S	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05E	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.12	1.16	0.85	3.86	1.66	3.73	2.03	2.23	2.86	7.58	2.28	1.12	
STA AV	0.85	1.54	0.75	3.24	2.87	2.15	2.07	2.34	2.76	2.52	1.61	0.64	

NOTES: For daily air temperatures, in the vicinity, see table for Watershed W-14, 70.001. Precipitation data obtained from rain gage 17. Records began January 1965. STA AV based on 5 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED #3												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.019	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0007	0.0	0.0
INCHES	0.0	0.0	0.0	0.003	0.0	0.002	0.0	0.0	0.0	0.076	0.0	0.0
STA AV	0.0	0.0	0.0	0.253	0.012	0.000	0.0	0.0	0.0	0.015	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 3.552486. Records began January 1965. STA AV based on 5 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED #3											
ANTECEDENT CONDITIONS			RAINFALL								
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF OCTOBER 28 - 29, 1969											
RG 000017			RG 000017								
10-28	0.36	0.0	10-28	1040	0.0	0.0	10-28	1900	0.0	0.0	
				1110	0.0800	0.04		1904	0.0	0.0	
				1200	0.0240	0.06		1908	0.010	0.0001	
				1230	0.0200	0.07		1910	0.030	0.0002	
				1300	0.0800	0.11		1911	0.060	0.0003	
WATERSHED CONDITIONS: 100% rangeland; range in fair condition.				1340	0.0900	0.17		1912	0.090	0.0005	
				1350	0.1800	0.20		1914	0.130	0.0010	
				1400	0.4800	0.28		1916	0.200	0.0019	
				1405	0.3600	0.31		1918	0.240	0.0029	
				1430	0.0960	0.35		1920	0.270	0.0042	
				1510	0.0750	0.40		1924	0.290	0.0070	
				1520	0.0601	0.41		1940	0.290	0.0185	
				1530	0.2400	0.45		1950	0.270	0.0254	
				1540	0.3600	0.51		2000	0.220	0.0315	
				1550	0.2401	0.55		2010	0.200	0.0367	
				1600	0.1800	0.58		2020	0.170	0.0413	
				1700	0.0800	0.66		2030	0.140	0.0452	
				1800	0.0700	0.73		2040	0.130	0.0485	
				1840	0.2400	0.89		2050	0.100	0.0513	
				1845	0.8400	0.96		2100	0.080	0.0535	
				1850	1.2000	1.06		2110	0.060	0.0552	
				1855	0.7200	1.12		2120	0.060	0.0567	
				1900	0.2400	1.14		2130	0.040	0.0579	
				1908	0.0750	1.15		2150	0.030	0.0597	
				1910	1.2005	1.19		2210	0.030	0.0612	
				1915	0.4799	1.23		2240	0.030	0.0633	
				1920	0.2401	1.25		2300	0.020	0.0646	
				1940	0.0	1.25		2400	0.010	0.0674	
				2000	0.1200	1.29	10-29	100	0.010	0.0693	
				2130	0.0	1.29		500	0.0	0.0737	
				2150	0.1500	1.34		1010	0.0	0.0756	
				2200	0.0601	1.35					
				2400	0.0050	1.36					

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.148020.

RAIN GAGE
000017

PRECIPITATION
IN / HR

RUNOFF
CFS

TIME

28

29

SONORA, TEXAS WATERSHED W-4

LOCATION: Edwards County, Texas; 28 mi. (highway) south of Sonora; East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 4.50 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)													SONORA, TEXAS WATERSHED W-4	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1969	P	0.13	1.21	1.16	3.91	1.78	4.36	2.74	2.32	3.28	7.87	2.36	1.19	32.31
	Q	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.068	0.0	0.0	0.070
STA AV	P	0.90	1.37	0.97	4.14	1.83	2.31	2.82	2.73	3.48	2.86	1.88	0.57	25.85
	Q	0.0	0.0	0.0	0.060	0.0	0.000	0.0	0.0	0.0	0.017	0.0	0.0	0.077
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS														
	Maximum Discharge Date	1 Hour Date	2 Hours Date	6 Hours Date	12 Hours Date	1 Day Date	2 Days Date	8 Days Date						
1969	10-28	0.031	10-28	0.022	10-28	0.029	10-28	0.046	10-28	0.059	10-28	0.068	10-27	0.068
MAXIMUMS FOR PERIOD OF RECORD														
	4-30	0.320	4-30	0.200	4-30	0.240	4-30	0.250	4-30	0.250	4-30	0.250	4-30	0.250
	1966		1966		1966		1966		1966		1966		1966	

NOTES: Watershed conditions: Rangeland - 100% range in low good condition. Precipitation data from rain gage 18. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.10-4. Precipitation and runoff records began January 1966. For long-time precipitation records, see U.S. Weather Bureau records at Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969					SONORA, TEXAS WATERSHED W-4								
DAILY PRECIPITATION (inches)													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.20	1.10	0.0	0.0	0.60	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	2.93	0.0	0.0	0.0	2.00	0.0	0.0	
5	0.0	0.0	0.05E	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.12E	
6	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.0	0.0	0.26	0.0	0.19E	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	1.37	0.0	0.0	0.0	
12	0.0	0.0	0.0	1.09	0.0	0.0	0.0	0.0	0.0	2.37	0.0	0.0	
13	0.0	1.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.02	0.0	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.74	0.22	0.0	0.0	0.0	0.0	0.0	0.10E	0.0	
17	0.0	0.0	0.0	0.14	0.09E	0.0	0.0	0.0	0.25E	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.0	0.11E	0.0	
19	0.0	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.09E	0.0	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.69	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.79	0.0	0.0	0.68	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06E	0.0	0.0	0.12E	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.0	0.0	0.70	0.0	
27	0.0	0.0	0.0	0.72	0.0	0.0	1.62	0.0	0.0	1.27	0.19E	0.03E	
28	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.88	0.0	1.91	0.46	0.35	
29	0.04E	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	0.0	0.06	0.0	0.50S	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	0.13	1.21	1.16	3.91	1.78	4.36	2.74	2.32	3.28	7.87	2.36	1.19	
STA AV	0.90	1.37	0.97	4.14	1.83	2.31	2.82	2.73	3.48	2.86	1.88	0.57	

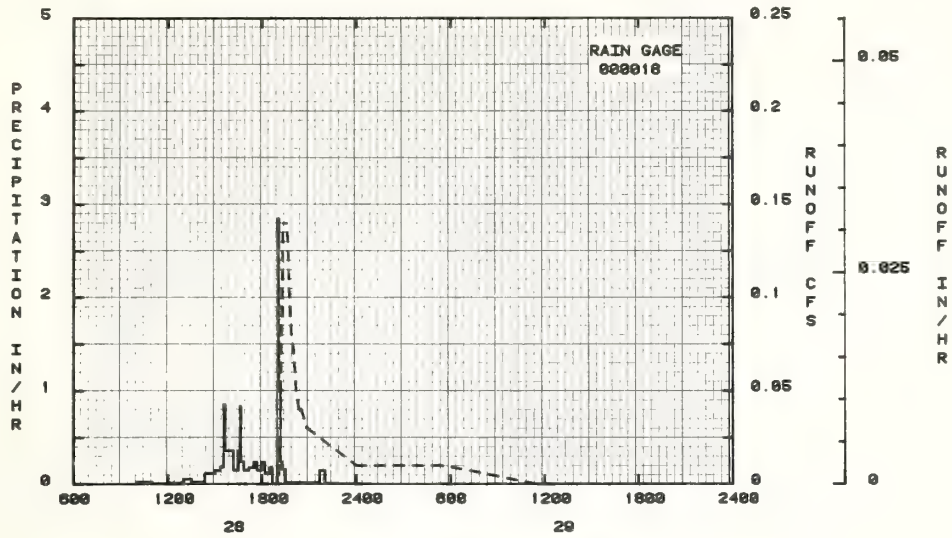
NOTES: For daily air temperatures, in the vicinity, see table for Watershed W-14, p. 70.001. Precipitation data obtained from rain gage 18. Records began January 1966. STA AV based on 4 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED W-4												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0004	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.068	0.0	0.0
STA AV	0.0	0.0	0.0	0.060	0.0	0.000	0.0	0.0	0.0	0.017	0.0	0.0

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 5.289256. Records began January 1966. STA AV based on 4 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED W-4										
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF OCTOBER 28 - 29, 1969										
RG 000018			RG 000018							
10-28	0.37	0.0	10-28	1000	0.0	0.0	10-28	1548	0.0	0.0
				1100	0.0300	0.03		1550	0.0	0.0
				1200	0.0100	0.04		1900	0.0	0.0007
				1300	0.0200	0.06		1904	0.0	0.0007
				1330	0.0600	0.09		1906	0.010	0.0007
WATERSHED CONDITIONS: 100% rangeland; rangeland in low good condition.				1420	0.0240	0.11		1908	0.020	0.0008
				1500	0.1200	0.19		1910	0.020	0.0009
				1520	0.1500	0.24		1912	0.050	0.0012
				1533	0.1847	0.28		1914	0.080	0.0017
				1540	0.8571	0.38		1916	0.100	0.0024
				1550	0.3600	0.44		1918	0.130	0.0032
				1600	0.3600	0.50		1920	0.140	0.0042
				1610	0.3601	0.56		1934	0.140	0.0115
				1630	0.1500	0.61		1938	0.130	0.0135
				1635	0.3602	0.64		1942	0.110	0.0153
	1640	0.8400	0.71		1947	0.090	0.0171			
	1650	0.2400	0.75		1952	0.080	0.0187			
	1710	0.1500	0.80		2000	0.070	0.0209			
	1730	0.1800	0.86		2010	0.050	0.0231			
	1740	0.2401	0.90		2020	0.040	0.0250			
	1800	0.1500	0.95		2030	0.040	0.0266			
	1810	0.2400	0.99		2050	0.030	0.0292			
	1830	0.1200	1.03		2400	0.010	0.0442			
	1840	0.1800	1.06		10-29	530	0.010	0.0575		
	1900	0.0	1.06			1130	0.0	0.0668		
	1904	2.8499	1.25			1330	0.0	0.0679		
	1907	1.0003	1.30			1730	0.0	0.0683		
	1910	1.0000	1.35							
	1915	0.2400	1.37							
	1930	0.1600	1.41							
	2140	0.0185	1.45							
	2200	0.1500	1.50							
	2400	0.0100	1.52							

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.220386.



SONORA, TEXAS WATERSHED W-5

LOCATION: Edwards County, Texas; 28 mi. (highway) south of Sonora; East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 7.20 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED W-5									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	0.10	1.00	0.98	3.80	1.64	4.22	2.48	2.14	2.78	7.49	2.03	1.11	29.77									
	Q	0.0	0.001	0.0	0.010	0.0	0.417	0.017	0.0	0.005	0.623	0.0	0.0	1.073									
STA AV	P	0.87	1.22	0.93	3.90	1.78	2.25	2.51	2.67	2.88	2.71	1.66	0.54	23.90									
	Q	0.0	0.000	0.0	0.293	0.016	0.105	0.005	0.030	0.001	0.156	0.0	0.0	0.606									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval								2 Days		8 Days					
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.						
1969		6- 4	0.457	6- 4	0.306	6- 4	0.364	6- 4	0.417	6- 3	0.417	6- 3	0.417	6- 2	0.417	10-21	0.418						
MAXIMUMS FOR PERIOD OF RECORD																							
		4-30	1.380	4-30	0.790	4-30	1.010	4-30	1.080	4-30	1.080	4-30	1.080	4-29	1.130	4-24	1.150						
		1966		1966		1966		1966		1966		1966		1966		1966							

NOTES: Watershed conditions: Rangeland - 100%; range overgrazed, low poor condition. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.11-5. Precipitation data from rain gage 19. Precipitation and runoff records began January 1966. For long-time precipitation records, see U.S. Weather Bureau records at Texas Agricultural Experiment Station, Substation W-14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)													SONORA, TEXAS WATERSHED W-5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

NOTES: For daily air temperatures, in the vicinity, see table for Watershed W-14, p. 70.001. Precipitation data obtained from rain gage 19. Records began January 1966. STA AV based on 4 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED #5												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.126	0.0	0.0	0.0	0.002	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.059	0.0	0.0
13	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.001	0.0	0.0	0.005	0.0	0.0	0.001	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.121	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.005	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0001	0.0	0.0042	0.0002	0.0	0.0001	0.0061	0.0	0.0
INCHES	0.0	0.001	0.0	0.010	0.0	0.417	0.017	0.0	0.005	0.623	0.0	0.0
STA AV	0.0	0.000	0.0	0.293	0.016	0.105	0.005	0.030	0.001	0.156	0.0	0.0

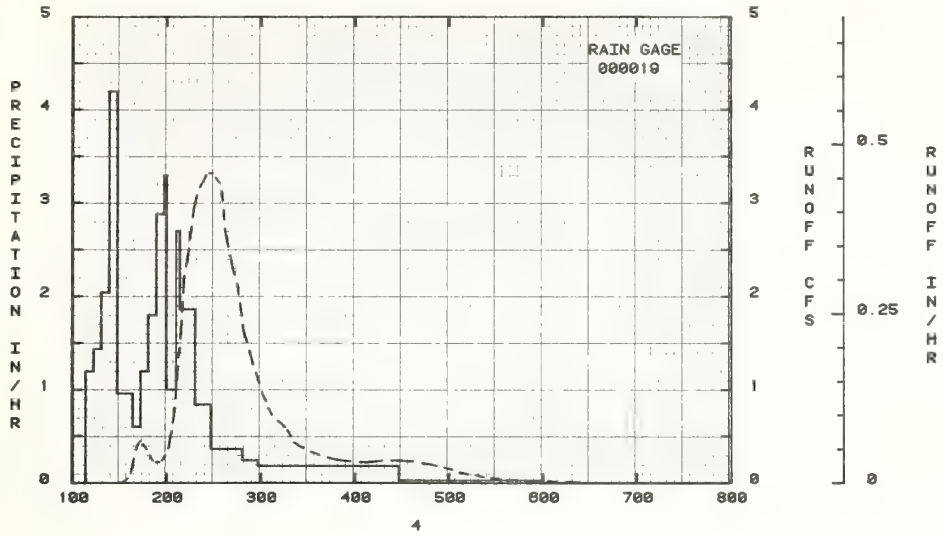
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 3.305785. Records began January 1966. STA AV based on 4 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED #5									
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)
EVENT OF JUNE 4, 1969									
RG 000019			RG 000019						
6- 4	0.0	0.0	6- 4	108	0.0	0.0	6- 4	125	0.0
				113	1.2000	0.10		127	0.0
				118	1.4400	0.22		129	0.0
				123	2.0400	0.39		131	0.010
				128	4.2000	0.74		133	0.020
				138	0.9600	0.90		135	0.050
				143	0.6000	0.95		137	0.110
				148	1.2000	1.05		139	0.260
				153	1.8000	1.20		141	0.400
				158	2.8800	1.44		143	0.450
				200	3.2999	1.55		145	0.410
				206	1.0000	1.65		147	0.360
				208	2.7000	1.74		149	0.290
				218	1.8600	2.05		151	0.240
				228	0.8400	2.19		153	0.220
				238	0.3600	2.25		155	0.220
				248	0.3600	2.31		157	0.240
				258	0.2400	2.35		159	0.290
				328	0.1800	2.44		201	0.370
				358	0.1800	2.53		203	0.550
				428	0.1800	2.62		205	0.810
				558	0.0267	2.66		207	1.250
								209	1.640
								211	2.220
								213	2.410
								215	2.650
								217	2.930
								219	3.080
								221	3.170
								225	3.300
								227	3.320
								229	3.320
								231	3.270
								233	3.220
								235	3.120

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.137741.

1969			SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-5					
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF JUNE 4, 1969 (CONTINUED)											
							6- 4	237	2.720	0.2240	
								239	2.530	0.2361	
								241	2.390	0.2473	
								243	2.230	0.2580	
								245	2.120	0.2680	
								247	1.890	0.2772	
								249	1.620	0.2853	
								251	1.510	0.2925	
								253	1.390	0.2992	
								255	1.270	0.3053	
								257	1.170	0.3109	
								259	1.070	0.3160	
								301	0.950	0.3206	
								303	0.880	0.3248	
								305	0.800	0.3287	
								307	0.730	0.3322	
								311	0.660	0.3386	
								315	0.600	0.3444	
								317	0.560	0.3471	
								319	0.500	0.3495	
								321	0.430	0.3516	
								327	0.370	0.3572	
								332	0.330	0.3613	
								337	0.300	0.3649	
								347	0.250	0.3712	
								357	0.230	0.3767	
								407	0.220	0.3820	
								417	0.240	0.3873	
								427	0.240	0.3928	
								437	0.230	0.3982	
								447	0.200	0.4032	
								452	0.180	0.4054	
								457	0.160	0.4074	
								502	0.140	0.4091	
								507	0.110	0.4105	
								512	0.090	0.4117	
								517	0.080	0.4127	
								522	0.060	0.4135	
								527	0.050	0.4141	
								532	0.040	0.4146	
								537	0.030	0.4150	
								557	0.020	0.4160	
								617	0.010	0.4166	
								637	0.0	0.4169	
								707	0.0	0.4171	
								807	0.0	0.4172	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.137741.



EVENT OF JUNE 4, 1969
SONORA, TEXAS WATERSHED W-5

SONORA, TEXAS WATERSHED #6

LOCATION: Edwards County, Texas; 28 mi. (highway) south of Sonora; East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 6.90 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED #6									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual									
1969	P	0.11	1.16	1.08	3.83	1.67	4.20	2.55	2.24	3.36	7.66	2.41	1.16	31.43									
	Q	0.0	0.0	0.0	0.0	0.0	0.078	0.0	0.0	0.002	0.056	0.0	0.0	0.136									
STA AV	P	0.95	1.30	1.02	4.13	1.75	2.22	2.57	2.85	3.20	2.82	2.01	0.54	25.35									
	Q	0.0	0.0	0.0	0.230	0.010	0.020	0.0	0.010	0.000	0.014	0.0	0.0	0.284									
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																							
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days					
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.				
1969		6- 4	0.133	6- 4	0.071	6- 4	0.077	6- 3	0.078	6- 3	0.078	6- 3	0.078	6- 3	0.078	6- 2	0.078	5-27	0.078				
MAXIMUMS FOR PERIOD OF RECORD																							
		4-30	1.900	4-30	0.840	4-30	0.910	4-30	0.910	4-30	0.910	4-30	0.910	4-29	0.910	4-24	0.920						
		1966		1966		1966		1966		1966		1966		1966		1966							

NOTES: Watershed conditions: Rangeland - 100%; range condition - poor. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.12-4. Precipitation data from rain gage 20. Precipitation and runoff records began January 1966. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)						SONORA, TEXAS WATERSHED #6							
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.0	0.0	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.0	0.0	0.0	0.0	0.22	0.95	0.0	0.0	0.31	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	2.84	0.0	0.0	0.0	2.00	0.0	0.0	
5	0.0	0.0	0.06E	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	
6	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.26	0.0	0.19E	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0	0.0	0.0	0.0	0.97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.0	0.0	0.01E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	1.72	0.0	0.0	0.0	
12	0.0	0.0	0.0	1.12	0.0	0.0	0.0	0.0	0.0	2.12	0.0	0.0	
13	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.0	0.0	0.0	
15	0.0	0.0	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.68	0.20	0.0	0.0	0.0	0.0	0.0	0.14E	0.0	
17	0.0	0.0	0.0	0.14	0.09E	0.0	0.0	0.0	0.24E	0.0	0.0	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.10E	0.0	
19	0.0	0.08E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	0.0	0.08E	0.0	0.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.0	0.55	0.0	0.0	0.0	0.63	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.65	0.0	0.0	0.72	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08E	0.0	0.0	0.14E	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.0	0.0	0.69	0.0	
27	0.0	0.0	0.0	0.73	0.0	0.0	1.22	0.0	0.0	1.30	0.19E	0.03E	
28	0.06E	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.0	1.96	0.43	0.36	
29	0.02E		0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.02	0.0	0.50S	
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0 E	0.0	0.0	0.0	0.0	
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0	
TOTAL	0.11	1.16	1.08	3.83	1.67	4.20	2.55	2.24	3.36	7.66	2.41	1.16	
STA AV	0.95	1.30	1.02	4.13	1.75	2.22	2.57	2.85	3.20	2.82	2.01	0.54	

NOTES: For daily air temperature, in the vicinity, see table for Watershed #14, p. 70.001. Precipitation data obtained from rain gage 20. Records began January 1966. STA AV based on 4 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED W-6												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.023	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.015	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0008	0.0	0.0	0.0	0.0005	0.0	0.0
INCHES	0.0	0.0	0.0	0.0	0.0	0.078	0.0	0.0	0.002	0.056	0.0	0.0
STA AV	0.0	0.0	0.0	0.230	0.010	0.020	0.0	0.010	0.000	0.014	0.0	0.0

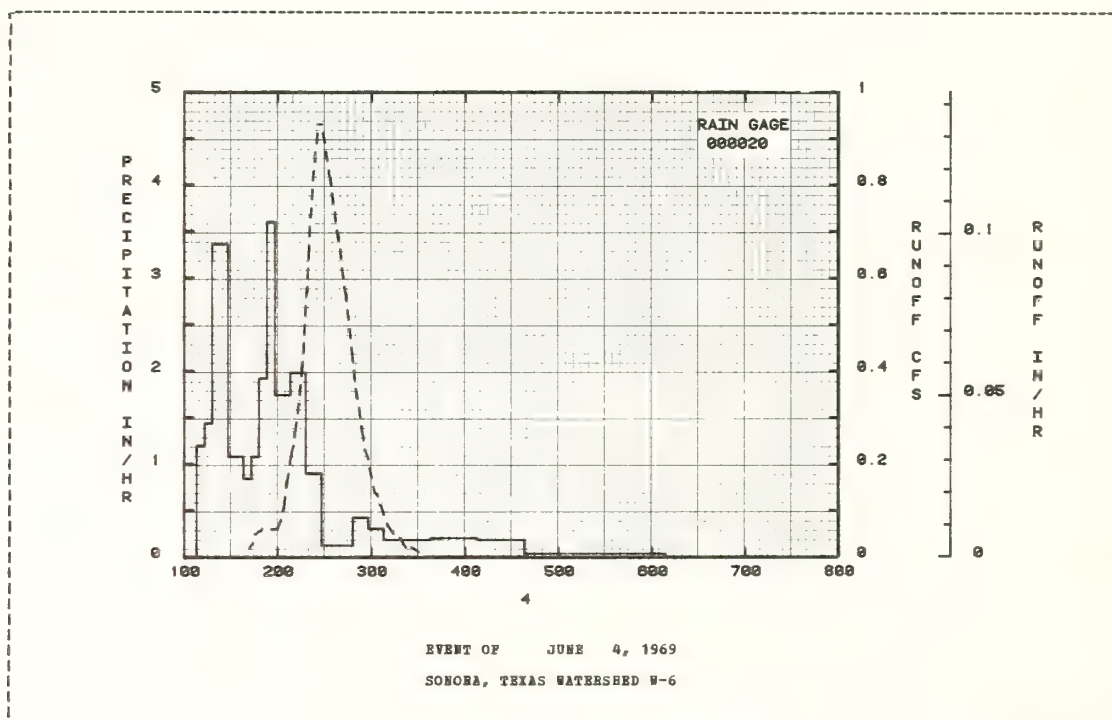
NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 3.449763. Records began January 1966. STA AV based on 4 yr record period.

1969 SELECTED RUNOFF EVENT SONORA, TEXAS WATERSHED W-6									
ANTECEDENT CONDITIONS			RAINFALL			RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 4, 1969									
6- 4	RG 000020	0.0	6- 4	RG 000020	0.0	6- 4	130	0.0	0.0
	0.0	0.0		108	0.0		134	0.0	0.0
				113	1.2000		138	0.0	0.0
				118	1.4400		140	0.0	0.0
				128	3.3600		142	0.020	0.0001
				138	1.0800		144	0.030	0.0002
				143	0.8400		146	0.050	0.0004
				148	1.0800		150	0.060	0.0009
				153	1.9200		200	0.060	0.0023
				158	3.6000		202	0.080	0.0026
				208	1.7400		204	0.110	0.0031
				218	1.9800		206	0.160	0.0037
				228	0.9000		208	0.210	0.0046
				248	0.1200		210	0.240	0.0057
				258	0.4200		212	0.290	0.0070
				308	0.3000		214	0.350	0.0085
				338	0.1800		216	0.420	0.0103
				408	0.2000		218	0.540	0.0126
				438	0.1800		220	0.670	0.0155
				608	0.0333		222	0.790	0.0190
							224	0.870	0.0230
							226	0.930	0.0273
							228	0.930	0.0318
							230	0.890	0.0362
							234	0.800	0.0443
							238	0.700	0.0515
							240	0.660	0.0547
							242	0.600	0.0577
							244	0.550	0.0605
							246	0.490	0.0630
							248	0.420	0.0652
							250	0.360	0.0671
							252	0.320	0.0687
							254	0.270	0.0701
							256	0.230	0.0713

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.143740.

1969 SELECTED RUNOFF EVENT			SONORA, TEXAS WATERSHED W-6							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JUNE 4, 1969 (CONTINUED)										
							6- 4	258	0.210	0.0724
								300	0.170	0.0733
								302	0.140	0.0741
								304	0.130	0.0748
								306	0.110	0.0754
								308	0.090	0.0759
								310	0.070	0.0763
								314	0.050	0.0769
								318	0.040	0.0773
								322	0.020	0.0776
								326	0.020	0.0778
								330	0.010	0.0779
								335	0.0	0.0780
								340	0.0	0.0780
								440	0.0	0.0781

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.143740.



SONORA, TEXAS WATERSHED W-7

LOCATION: Sutton County, Texas; 10 mi. NE of Sonora; Lowrey Draw, East Fork Devils River, Devils River, Rio Grande River Basin.

AREA: 12.20 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														SONORA, TEXAS WATERSHED W-7															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.11	1.03	1.45	3.80	2.15	1.05	2.35	1.70	2.43	6.17	2.61	2.88	27.73															
	Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.011	0.011															
STA AV	P	0.78	1.21	1.10	2.61	2.93	1.76	1.73	0.92	2.71	1.90	1.67	1.07	20.39															
	Q	0.0	0.0	0.0	0.030	0.120	0.150	0.0	0.0	0.012	0.0	0.0	0.002	0.315															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Date	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		12-28	0.015	12-28	0.010	12-28	0.011	12-28	0.011	12-28	0.011	12-27	0.011	12-26	0.011	12-20	0.011												
MAXIMUMS FOR PERIOD OF RECORD																													
		6- 2	0.910	6- 2	0.570	6- 2	0.660	6- 2	0.660	6- 2	0.660	6- 2	0.730	6- 2	0.730	6- 2	0.730												
		1967		1967		1967		1967		1967		1967		1967		1967													

NOTES: Watershed conditions: Rangeland - 100%; range condition - high fair. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1967, USDA Misc. Pub. 1262, p. 70.13-6. Precipitation data from rain gage 1. Precipitation and runoff records began January 1965. For long-time precipitation records, see U.S. Weather Bureau records at the Texas Agricultural Experiment Station, Substation No. 14, 18 miles south of Sonora, Texas.

1969 DAILY PRECIPITATION (inches)													SONORA, TEXAS WATERSHED W-7												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.05E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
3	0.0	0.0	0.0	0.0	0.44	0.59	0.0	0.0	0.0	0.0	0.0	0.0													
4	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	1.06	0.0	0.0													
5	0.0	0.0	0.09E	0.0	0.84	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
6	0.0	0.0	0.0	0.0	0.43	0.0	0.0	0.0	0.0	0.11E	0.0	0.27													
7	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
8	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
9	0.0	0.0	0.0	0.03E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0													
11	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.97	0.0	0.0	0.0													
12	0.0	0.0	0.0	1.45	0.0	0.0	0.0	0.0	0.0	1.91	0.0	0.0													
13	0.0	0.85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
15	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.70	0.0	0.0	0.0	0.0													
16	0.0	0.0	0.0	0.0	0.04E	0.0	0.0	0.0	0.0	0.0	0.11E	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	1.04	0.0	0.0													
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21E	0.0	0.0	0.0													
19	0.0	0.08E	0.0	0.51	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.0													
20	0.0	0.10E	0.0	0.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
21	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.11E	0.0	0.0	0.0													
22	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.0													
23	0.0	0.0	0.94	0.0	0.0	0.0	0.0	0.29	0.0	0.07E	0.0	0.0													
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22	0.0													
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.26	0.0													
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.66	0.0													
27	0.0	0.0	0.0	0.0	0.99	0.0	0.0	1.25	0.09E	0.0	0.92	0.15E	0.05E												
28	0.04E	0.0	0.0	0.0	0.0	0.0	0.02E	0.09E	0.0	2.06	0.21E	1.52													
29	0.02E		0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.04	0.0	0.33E													
30	0.0		0.06E	0.0	0.0	0.0	0.0	0.02E	0.0	0.0	0.0	0.0													
31	0.0		0.0		0.0	0.0	0.0	0.0		0.0		0.0													
TOTAL	0.11	1.03	1.45	3.80	2.15	1.05	2.35	1.70	2.43	6.17	2.61	2.88													
STA AV	0.78	1.21	1.10	2.61	2.93	1.76	1.73	0.92	2.71	1.90	1.67	1.07													

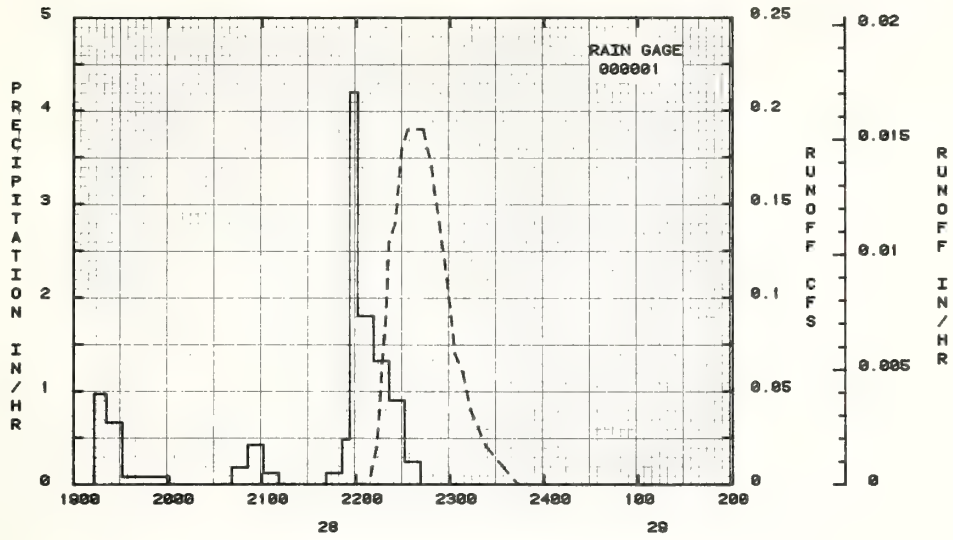
NOTES: For daily air temperatures, in the vicinity, see table for Watershed W-14, p. 70.001. Precipitation data obtained from rain gage 1. Records began January 1965. STA AV based on 5 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) SONORA, TEXAS WATERSHED W-7												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.006
29	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0002
INCHES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.011
STA AV	0.0	0.0	0.0	0.030	0.120	0.150	0.0	0.0	0.012	0.0	0.0	0.002

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 1.950955. Records began January 1965. STA AV based on 5 yr record period.

1969 SELECTED RUNOFF EVENT						SONORA, TEXAS WATERSHED W-7					
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF				
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.	
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)	
EVENT OF DECEMBER 28, 1969											
RG 000001			RG 000001								
12-28	0.0	0.0	12-28	1913	0.0	0.0	12-28	2203	0.0	0.0	
				1921	0.9749	0.13		2208	0.0	0.0	
				1931	0.6600	0.24		2213	0.020	0.0001	
				2001	0.0800	0.28		2215	0.040	0.0002	
				2041	0.0	0.28		2217	0.070	0.0003	
WATERSHED CONDITIONS:				2051	0.1800	0.31		2219	0.090	0.0005	
Rangeland - 100%, range				2101	0.4199	0.38		2221	0.130	0.0008	
condition - high fair.				2111	0.1200	0.40		2225	0.140	0.0015	
				2141	0.0	0.40		2229	0.180	0.0024	
				2151	0.1200	0.42		2233	0.190	0.0034	
				2156	0.4799	0.46		2243	0.190	0.0060	
				2201	4.1996	0.81		2248	0.170	0.0072	
				2211	1.8001	1.11		2253	0.140	0.0083	
				2221	1.3200	1.33		2258	0.110	0.0091	
				2231	0.8999	1.48		2303	0.070	0.0097	
				2241	0.2400	1.52		2308	0.060	0.0102	
								2313	0.040	0.0105	
								2323	0.020	0.0109	
								2333	0.010	0.0111	
								2343	0.0	0.0112	
								2358	0.0	0.0112	

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.081290.



EVENT OF DECEMBER 28, 1969

SONORA, TEXAS WATERSHED W-7

TREYNOR, IOWA WATERSHED 1

LOCATION: Pottawattamie County, Iowa; approximately 6 miles southwest of Treynor; Silver Creek, West Mishnabotna River, Missouri River Basin.

AREA: 74.50 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)										TREYNOR, IOWA WATERSHED 1									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	0.65	0.86	0.36	4.94	3.73	4.34	5.10	4.05	1.37	4.17	0.07	1.21	30.85					
	Q	0.561	1.255	0.572	0.537	0.383	0.342	0.578	0.517	0.272	0.276	0.238	0.199	5.730					
STA AV	P	0.58	0.56	0.94	3.35	4.18	7.82	3.78	3.88	4.56	2.60	0.69	0.91	33.83					
	Q	0.289	0.595	0.596	0.383	0.644	2.925	0.418	0.388	0.669	0.329	0.236	0.234	7.705					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		8-20	0.887	8-20	0.190	8-20	0.197	2-25	0.274	2-25	0.320	2-24	0.350	2-23	0.570	2-22	1.068		
MAXIMUMS FOR PERIOD OF RECORD																			
		6-20	5.835	6-20	3.150	6-20	4.160	6-20	4.224	6-20	4.232	6-20	4.246	6-20	4.264	6-4	5.979		
		1967		1967		1967		1967		1967		1967		1967		1967			

NOTES: Watershed conditions: 95% contoured corn; 5% gullies and grassed waterways. Precipitation from rain gage 117 before April 1 and after November 1; Thiessen average of gages 116, 117, 118 for remainder of year. Precipitation records began January 1, 1964. Runoff records began February 10, 1964. January 1 to February 10, 1964 runoff estimated and included in average. For daily air temperature, in the vicinity, see table for Watershed 3 (71.003). For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 71.1-5. For long-time precipitation records, see U.S. Weather Bureau records at Omaha, Nebraska.

1969 DAILY PRECIPITATION (inches)													TREYNOR, IOWA WATERSHED 1												
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
	1	0.0	0.0	0.0	0.0	0.37	0.0	0.0	0.02	0.0	0.0	0.0	0.0												
	2	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.28	0.0	0.0	0.0	0.0												
	3	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.0												
	4	0.0	0.0	0.0	1.21	0.0	0.0	0.0	0.05	0.12	0.0	0.0	0.0												
	5	0.10	0.0	0.0	0.0	0.25	0.0	0.0	0.0	0.45	0.57	0.0	0.15												
	6	0.0	0.0	0.02	0.0	0.08	0.0	0.46	0.0	0.0	0.0	0.0	0.65												
	7	0.0	0.0	0.02	0.0	0.81	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0												
	9	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.0	0.0	0.0												
	10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.81	0.02	0.0												
	11	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.0	0.0	0.0	0.0												
	12	0.0	0.0	0.0	0.0	0.03	1.60	0.0	0.0	0.0	1.25	0.0	0.0												
	13	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	14	0.0	0.22	0.0	0.03	0.0	0.24	0.0	0.0	0.0	0.0	0.0	0.0												
	15	0.10	0.14	0.0	0.26	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0												
	16	0.0	0.0	0.0	1.40	0.43	0.0	0.16	0.0	0.0	0.0	0.0	0.0												
	17	0.19	0.0	0.0	1.12	0.0	0.0	3.06	0.0	0.0	0.0	0.05	0.0												
	18	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.01	0.0	0.0												
	19	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	0.48	0.0	0.0	0.0												
	20	0.0	0.05	0.0	0.0	0.0	0.0	0.0	2.50	0.0	0.0	0.0	0.05												
	21	0.0	0.03	0.0	0.0	1.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
	22	0.02	0.0	0.10	0.0	0.0	0.58	0.0	0.0	0.08	0.0	0.0	0.12												
	23	0.0	0.0	0.13	0.0	0.0	0.05	0.0	0.0	0.0	0.04	0.0	0.0												
	24	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0												
	25	0.0	0.0	0.0	0.07	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0												
	26	0.05	0.0	0.0	0.78	0.0	0.73	0.02	0.0	0.0	0.0	0.0	0.0												
	27	0.0	0.30	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18												
	28	0.0	0.10	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0	0.0												
	29	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0												
	30	0.0	0.0	0.0	0.0	0.0	0.35	0.04	0.04	0.0	0.19	0.0	0.0												
	31	0.0	0.0	0.0	0.02	0.0	0.0	0.0	1.11	0.27	0.0	0.0	0.06												
TOTAL		0.65	0.86	0.36	4.94	3.73	4.34	5.10	4.05	1.37	4.17	0.07	1.21												
STA AV		0.58	0.56	0.94	3.35	4.18	7.82	3.78	3.88	4.56	2.60	0.69	0.91												

NOTES: Daily precipitation amounts are from rain gage 117 before April 1 and after November 1; Thiessen weighted average values from stations 116, 117, and 118 for remainder of year. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 1												
1969 MEAN DAILY DISCHARGE (cfs)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.020	0.014	0.193	0.025	0.042	0.032	0.032	0.028	0.031	0.025	0.025	0.022
2	0.020	0.014	0.244	0.025	0.039	0.029	0.032	0.039	0.025	0.025	0.025	0.020
3	0.017	0.014	0.060	0.025	0.038	0.033	0.032	0.038	0.074	0.025	0.025	0.020
4	0.014	0.016	0.091	0.073	0.038	0.032	0.032	0.038	0.035	0.025	0.025	0.020
5	0.014	0.201	0.031	0.032	0.042	0.029	0.032	0.036	0.044	0.031	0.025	0.020
6	0.014	0.048	0.129	0.032	0.041	0.029	0.042	0.033	0.032	0.025	0.025	0.020
7	0.014	0.028	0.075	0.032	0.058	0.030	0.035	0.030	0.028	0.025	0.025	0.020
8	0.014	0.025	0.025	0.028	0.038	0.030	0.032	0.031	0.025	0.025	0.025	0.020
9	0.014	0.025	0.025	0.028	0.035	0.028	0.043	0.032	0.025	0.025	0.025	0.020
10	0.014	0.291	0.022	0.032	0.032	0.025	0.032	0.030	0.027	0.035	0.026	0.020
11	0.014	0.057	0.018	0.028	0.030	0.031	0.032	0.028	0.027	0.028	0.025	0.020
12	0.014	0.019	0.016	0.025	0.029	0.135	0.028	0.029	0.025	0.055	0.025	0.020
13	0.014	0.014	0.016	0.025	0.030	0.027	0.025	0.029	0.025	0.030	0.025	0.020
14	0.014	0.014	0.016	0.025	0.030	0.029	0.025	0.030	0.025	0.025	0.025	0.020
15	0.815	0.014	0.026	0.028	0.030	0.029	0.025	0.032	0.025	0.034	0.025	0.020
16	0.351	0.014	0.039	0.192	0.037	0.029	0.029	0.030	0.025	0.032	0.025	0.020
17	0.037	0.014	0.037	0.258	0.033	0.029	0.587	0.032	0.025	0.025	0.025	0.020
18	0.030	0.014	0.042	0.056	0.032	0.027	0.236	0.032	0.025	0.025	0.022	0.020
19	0.025	0.014	0.057	0.047	0.042	0.025	0.047	0.032	0.025	0.037	0.022	0.020
20	0.025	0.017	0.070	0.047	0.033	0.025	0.042	0.680	0.025	0.025	0.025	0.020
21	0.025	0.020	0.054	0.051	0.096	0.025	0.038	0.035	0.025	0.025	0.025	0.020
22	0.085	0.202	0.072	0.060	0.040	0.048	0.038	0.030	0.027	0.025	0.025	0.020
23	0.026	0.650	0.109	0.065	0.038	0.031	0.038	0.030	0.025	0.025	0.025	0.020
24	0.022	0.670	0.130	0.065	0.038	0.029	0.038	0.030	0.025	0.025	0.025	0.020
25	0.017	1.079	0.035	0.060	0.038	0.025	0.038	0.028	0.025	0.025	0.025	0.020
26	0.014	0.094	0.032	0.118	0.038	0.101	0.038	0.025	0.025	0.025	0.025	0.020
27	0.014	0.305	0.028	0.080	0.038	0.029	0.038	0.025	0.025	0.025	0.025	0.020
28	0.014	0.039	0.025	0.042	0.038	0.035	0.035	0.025	0.025	0.025	0.025	0.020
29	0.014		0.025	0.038	0.038	0.027	0.028	0.025	0.025	0.025	0.025	0.020
30	0.014		0.025	0.038	0.035	0.036	0.028	0.025	0.025	0.027	0.025	0.020
31	0.014		0.025		0.032		0.028	0.049		0.029		0.020
MEAN	0.0566	0.1403	0.0578	0.0561	0.0386	0.0357	0.0583	0.0522	0.0284	0.0279	0.0249	0.0201
INCHES	0.561	1.255	0.572	0.537	0.383	0.342	0.578	0.517	0.272	0.276	0.238	0.199
STA AV	0.289	0.595	0.596	0.383	0.644	2.925	0.418	0.388	0.669	0.329	0.236	0.234

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.31948. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 2

LOCATION: Pottawattamie County, Iowa; approximately 6 miles southwest of Treynor; Keg Creek, Missouri River Basin.

AREA: 82.80 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)										TREYNOR, IOWA WATERSHED 2							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.65	0.86	0.90	4.91	4.02	4.27	4.87	4.04	1.53	4.21	0.07	1.21	31.54			
	Q	0.550	1.251	0.462	0.325	0.323	0.360	0.478	0.451	0.312	0.308	0.259	0.241	5.319			
STA AV	P	0.58	0.56	1.03	3.33	4.14	7.79	3.68	3.76	4.59	2.58	0.70	0.91	33.61			
	Q	0.303	0.679	0.612	0.348	0.625	2.747	0.342	0.351	0.610	0.327	0.221	0.220	7.385			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval									
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days	
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		8-20	0.442	8-20	0.142	8-20	0.164	2-25	0.310	2-25	0.361	2-24	0.399	2-23	0.610	2-22	1.054
MAXIMUMS FOR PERIOD OF RECORD																	
		6-20	4.866	6-20	2.701	6-20	3.693	6-20	3.780	6-20	3.786	6-20	3.796	6-20	3.810	6-4	5.531
		1967		1967		1967		1967		1967		1967		1967		1967	

NOTES: Watershed conditions: 95% contoured corn; 5% gullies and grassed waterways. Precipitation from rain gage 117 before April 1 and after November 1; Thiessen average of rain gages 115, 116, and 118 for remainder of year. Precipitation records began January 1, 1964. Runoff records began February 3, 1964. January 1 to February 3, 1964 runoff estimated and included in average. For daily air temperature, in the vicinity, see table for Watershed 3 (71.003). For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 71.2-5. For long-time precipitation records, see U.S. Weather Bureau records period at Omaha, Nebraska.

1969 DAILY PRECIPITATION (inches)													
TREYNOR, IOWA WATERSHED 2													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.68	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.26	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	1.23	0.0	0.0	0.0	0.05	0.14	0.0	0.0	0.0	0.0
5	0.10	0.0	0.0	0.0	0.26	0.0	0.0	0.0	0.48	0.54	0.0	0.0	0.15
6	0.0	0.0	0.04	0.0	0.07	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.65
7	0.0	0.0	0.04	0.0	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0	0.0	0.0	0.0
10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.83	0.02	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.03	1.60	0.0	0.0	0.0	0.0	1.28	0.0	0.0
13	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.22	0.0	0.03	0.0	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.10	0.14	0.0	0.28	0.0	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.0
16	0.0	0.0	0.0	1.37	0.42	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0
17	0.19	0.0	0.0	1.09	0.0	0.0	2.94	0.0	0.0	0.0	0.0	0.05	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.0	0.0	0.01	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.28	0.0	0.0	0.0	0.0	0.48	0.0	0.0	0.0
20	0.0	0.05	0.0	0.0	0.0	0.0	0.0	2.51	0.0	0.0	0.0	0.05	0.0
21	0.0	0.03	0.0	0.0	1.43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.02	0.0	0.26	0.0	0.0	0.57	0.0	0.0	0.09	0.0	0.0	0.0	0.12
23	0.0	0.0	0.33	0.0	0.0	0.05	0.0	0.0	0.0	0.04	0.0	0.0	0.0
24	0.0	0.0	0.23	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0
25	0.0	0.0	0.0	0.07	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.05	0.0	0.0	0.77	0.0	0.71	0.02	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.30	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18
28	0.0	0.10	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.31	0.04	0.04	0.0	0.20	0.0	0.0	0.0
31	0.0	0.0	0.0	0.02	0.0	0.0	0.0	1.11	0.0	0.27	0.0	0.0	0.06
TOTAL	0.65	0.86	0.90	4.91	4.02	4.27	4.87	4.04	1.53	4.21	0.07	1.21	
STA AV	0.58	0.56	1.03	3.33	4.14	7.79	3.68	3.76	4.59	2.58	0.70	0.91	

NOTES: Daily precipitation amounts are Thiessen weighted average values from stations 115, 116, and 118 for period of April 1 through November 1, and from station 117 for remainder of year. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 2												
1969 MEAN DAILY DISCHARGE (cfs)												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.017	0.017	0.231	0.027	0.049	0.029	0.031	0.032	0.037	0.027	0.033	0.027
2	0.017	0.017	0.229	0.027	0.031	0.030	0.031	0.031	0.037	0.024	0.033	0.027
3	0.017	0.017	0.044	0.027	0.029	0.031	0.031	0.026	0.113	0.024	0.033	0.027
4	0.017	0.018	0.123	0.079	0.026	0.031	0.029	0.027	0.044	0.024	0.033	0.027
5	0.017	0.288	0.030	0.027	0.033	0.031	0.033	0.025	0.076	0.041	0.033	0.027
6	0.017	0.060	0.133	0.027	0.035	0.030	0.041	0.025	0.037	0.030	0.033	0.027
7	0.017	0.026	0.081	0.027	0.052	0.032	0.031	0.024	0.037	0.024	0.033	0.027
8	0.017	0.019	0.024	0.027	0.033	0.031	0.027	0.026	0.031	0.024	0.033	0.027
9	0.017	0.017	0.027	0.027	0.029	0.031	0.047	0.032	0.031	0.024	0.033	0.027
10	0.017	0.305	0.029	0.027	0.033	0.030	0.027	0.028	0.036	0.046	0.035	0.027
11	0.017	0.049	0.026	0.027	0.033	0.045	0.026	0.026	0.032	0.030	0.033	0.027
12	0.017	0.019	0.025	0.027	0.031	0.274	0.025	0.027	0.031	0.079	0.033	0.027
13	0.017	0.017	0.025	0.027	0.031	0.039	0.023	0.027	0.030	0.036	0.031	0.027
14	0.017	0.017	0.025	0.027	0.031	0.042	0.020	0.024	0.027	0.033	0.030	0.027
15	0.887	0.017	0.034	0.029	0.031	0.033	0.019	0.028	0.030	0.041	0.031	0.027
16	0.408	0.017	0.043	0.071	0.039	0.031	0.029	0.030	0.033	0.036	0.029	0.027
17	0.030	0.017	0.034	0.097	0.034	0.032	0.604	0.027	0.033	0.033	0.027	0.027
18	0.024	0.017	0.030	0.040	0.033	0.024	0.141	0.026	0.033	0.033	0.024	0.027
19	0.022	0.017	0.027	0.033	0.037	0.024	0.043	0.029	0.030	0.041	0.025	0.027
20	0.022	0.017	0.026	0.033	0.036	0.024	0.038	0.657	0.030	0.033	0.027	0.027
21	0.022	0.019	0.024	0.034	0.110	0.023	0.039	0.037	0.030	0.031	0.027	0.027
22	0.105	0.196	0.029	0.038	0.039	0.059	0.035	0.035	0.034	0.033	0.027	0.027
23	0.017	0.593	0.037	0.035	0.039	0.030	0.036	0.034	0.030	0.035	0.027	0.027
24	0.017	0.744	0.095	0.039	0.031	0.031	0.033	0.031	0.030	0.035	0.027	0.027
25	0.017	1.358	0.032	0.040	0.031	0.034	0.033	0.031	0.030	0.033	0.027	0.027
26	0.017	0.123	0.027	0.058	0.030	0.063	0.032	0.031	0.030	0.033	0.027	0.027
27	0.017	0.302	0.027	0.043	0.031	0.033	0.033	0.031	0.030	0.033	0.027	0.027
28	0.017	0.028	0.023	0.037	0.031	0.037	0.030	0.031	0.030	0.035	0.029	0.027
29	0.017		0.021	0.037	0.031	0.031	0.032	0.030	0.030	0.035	0.029	0.027
30	0.017		0.024	0.037	0.030	0.036	0.034	0.030	0.024	0.041	0.030	0.027
31	0.017		0.023		0.034		0.031	0.067		0.041		0.027
MEAN	0.0617	0.1555	0.0518	0.0377	0.0362	0.0417	0.0537	0.0506	0.0362	0.0346	0.0300	0.0270
INCHES	0.550	1.251	0.462	0.325	0.323	0.360	0.478	0.451	0.312	0.308	0.259	0.241
STA AV	0.303	0.679	0.612	0.348	0.625	2.747	0.342	0.351	0.610	0.327	0.221	0.220

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.28746. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 3

LOCATION: Pottawattamie County, Iowa; approximately 3 miles southwest of Treynor; Silver Creek, West Mishnabotna River, Missouri River Basin.

AREA: 107.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)										TREYNOR, IOWA WATERSHED 3									
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual					
1969	P	0.63	0.85	0.77	4.49	3.94	3.44	5.05	4.93	1.12	4.10	0.09	1.22	30.63					
	Q	0.578	1.005	0.564	0.370	0.486	0.349	0.475	0.427	0.216	0.196	0.181	0.160	5.007					
STA AV	P	0.54	0.57	0.96	3.47	4.13	7.63	3.48	3.34	4.37	2.58	0.64	0.90	32.62					
	Q	0.270	0.557	0.546	0.328	0.311	0.905	0.402	0.273	0.324	0.370	0.235	0.227	4.747					
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																			
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		8-20	0.129	2-25	0.089	2-25	0.169	2-25	0.351	2-25	0.400	2-24	0.442	2-23	0.579	2-22	0.948		
MAXIMUMS FOR PERIOD OF RECORD																			
		6-20	2.010	6-20	1.005	6-20	1.287	6-20	1.336	6-20	1.350	6-20	1.371	2-27	1.408	6-14	1.741		
		1967		1967		1967		1967		1967		1967		1965		1967			

NOTES: Watershed conditions: 96% permanent pasture with controlled grazing; 4% gravel roads and farmstead. Precipitation: Arithmetic average of rain gages 113 and 114 before April 1 and after November 1; Thiessen average of gages 112, 113 and 114 for remainder of year. Precipitation records began January 1, 1964. Runoff records began January 2, 1964, January 1, 1964 runoff estimated and included in average. For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 71.3-4. For long-time precipitation records, see U.S. Weather Bureau records at Omaha, Nebraska.

1969 DAILY AIR TEMPERATURE (degrees F)													TREYNOR, IOWA WATERSHED 3	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min		
1	12 -9	23 -7	35 23	57 36	78 52	66 47	80 58	80 68	80 60	80 53	44 36	56 30		
2	21 0	24 6	33 21	48 30	82 58	70 44	88 66	82 60	74 53	76 48	42 36	51 34		
3	0 -10	32 6	30 19	59 29	80 58	80 45	90 70	82 58	80 54	90 56	40 36	44 17		
4	14 -14	38 18	34 22	60 33	76 53	87 62	92 72	74 58	80 64	86 61	54 30	36 13		
5	40 14	39 20	33 22	42 31	77 56	94 53	78 62	89 64	86 64	70 42	66 32	36 30		
6	32 8	34 30	37 28	52 27	78 60	101 64	82 62	90 70	84 67	70 39	68 40	36 30		
7	20 5	32 26	31 15	72 40	61 54	84 64	88 66	85 65	80 62	70 44	68 38	30 21		
8	32 5	24 12	17 4	78 48	62 47	74 56	92 72	90 64	75 52	66 40	64 43	25 12		
9	12 0	32 8	18 7	56 44	70 40	78 54	76 68	85 67	72 46	80 54	62 42	32 17		
10	17 -3	42 26	22 8	62 37	62 43	81 51	88 67	88 64	88 52	62 45	62 43	22 12		
11	22 13	30 12	28 4	68 34	63 40	72 60	89 64	92 62	72 59	58 42	50 36	24 8		
12	30 18	20 5	28 14	72 40	72 41	63 50	96 74	90 61	78 55	45 34	50 30	34 8		
13	32 12	29 12	29 16	65 44	80 54	68 42	96 74	88 67	78 60	64 34	38 16	46 27		
14	36 28	26 24	30 12	54 42	78 56	60 48	97 80	85 62	84 64	44 26	30 14	36 18		
15	44 36	26 22	44 16	76 36	80 56	72 46	94 78	74 59	74 62	60 36	47 20	25 12		
16	37 31	27 15	51 26	63 50	74 49	76 50	92 76	86 62	69 56	46 31	58 31	32 16		
17	30 21	27 10	64 28	50 46	51 46	72 60	82 71	88 64	70 52	54 28	50 26	34 18		
18	32 22	34 12	60 30	58 38	62 48	89 56	88 72	88 66	62 54	52 44	28 17	34 26		
19	33 24	26 4	64 30	60 33	59 48	82 64	82 72	88 70	72 48	66 51	47 16	27 19		
20	36 29	33 24	37 23	74 39	64 52	78 50	80 65	83 68	74 48	64 42	39 22	28 16		
21	34 22	34 30	40 20	70 46	54 43	78 51	92 58	81 64	79 54	68 38	53 21	31 24		
22	36 10	36 32	58 26	68 42	54 42	75 60	89 62	78 60	74 56	41 30	50 31	26 20		
23	10 0	38 30	34 29	62 39	62 43	72 58	91 70	80 59	68 44	53 36	53 25	22 14		
24	8 -3	38 34	40 26	66 36	74 46	80 62	86 64	83 57	72 39	55 38	58 28	29 16		
25	13 -3	44 34	30 24	73 48	78 51	88 71	90 64	86 62	76 54	64 41	55 29	38 17		
26	20 9	36 32	42 20	66 45	88 61	80 60	90 68	84 63	84 48	41 28	52 28	22 15		
27	26 19	32 30	44 28	60 40	88 68	84 56	78 60	84 64	76 48	45 22	32 19	26 16		
28	25 8	32 27	40 9	56 34	89 66	81 55	82 61	87 66	74 48	48 21	46 18	26 14		
29	18 4		21 5	62 34	85 64	91 68	85 62	88 68	82 56	44 38	43 22	19 14		
30	12 0		28 12	70 48	85 60	81 62	88 64	88 64	86 55	44 40	57 31	17 10		
31	21 -2		50 24		82 54		80 65	70 62		42 37		18 8		
AV.	24 9	31 19	37 19	62 39	72 52	78 55	87 67	84 63	76 54	59 39	50 28	31 17		
MEAN	17.0	25.4	28.2	50.8	62.3	67.3	77.3	74.0	65.7	49.5	39.4	24.5		
STA AV	29 11	34 14	46 24	61 38	72 50	80 59	86 65	81 60	73 52	64 41	48 28	34 17		

NOTES: Temperature data taken from hygrothermograph charts. The recording period is from 0001 to 2400 for the date shown. STA AV based on 5 yr record period.

1969 DAILY PRECIPITATION (inches) TREYNOR, IOWA WATERSHED 3													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.46	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.08	0.0	0.02	0.0	0.0
4	0.0	0.0	0.0	1.13	0.0	0.0	0.0	0.05	0.07	0.0	0.0	0.0	0.0
5	0.12	0.0	0.0	0.0	0.44	0.0	0.0	0.0	0.52	0.47	0.0	0.16	
6	0.0	0.0	0.04	0.0	0.07	0.0	0.45	0.0	0.0	0.0	0.0	0.59	
7	0.0	0.0	0.04	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.05	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.73	0.0	0.0	0.0	0.0	0.0	0.0
10	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.88	0.02	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.03	1.05	0.0	0.0	0.0	1.27	0.0	0.0	0.0
13	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.22	0.0	0.03	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.09	0.14	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.0	0.0
16	0.0	0.0	0.0	1.24	0.44	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0
17	0.13	0.0	0.0	1.04	0.0	0.0	3.47	0.0	0.0	0.0	0.05	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.02	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.44	0.0	0.0	0.0
20	0.0	0.04	0.0	0.0	0.0	0.0	0.0	3.33	0.0	0.0	0.0	0.05	
21	0.0	0.02	0.0	0.0	1.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.03	0.0	0.13	0.0	0.0	0.53	0.0	0.0	0.10	0.0	0.0	0.16	0.0
23	0.0	0.0	0.39	0.0	0.0	0.05	0.0	0.0	0.0	0.05	0.0	0.0	0.0
24	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.0	0.0	0.0
25	0.0	0.0	0.0	0.09	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.08	0.0	0.0	0.73	0.0	0.65	0.06	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.30	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0
28	0.0	0.11	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.15		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.34	0.04	0.04	0.0	0.15	0.0	0.0	0.0
31	0.0		0.0		0.02		0.0	1.00		0.26		0.08	
TOTAL	0.63	0.85	0.77	4.49	3.94	3.44	5.05	4.93	1.12	4.10	0.09	1.22	
STA AV	0.54	0.57	0.96	3.47	4.13	7.63	3.48	3.34	4.37	2.58	0.64	0.90	

NOTES: Daily precipitation amounts are arithmetic average values from stations 113 and 114 before April 1 and after November 1; Thiessen weighted average values from rain gages 112, 113 and 114 for remainder of year. STA AV based on 6 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) TREYNOR, IOWA WATERSHED 3													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.033	0.261	0.039	0.065	0.064	0.039	0.041	0.039	0.024	0.027	0.030	
2	0.0	0.030	0.239	0.039	0.055	0.064	0.039	0.052	0.039	0.024	0.027	0.027	
3	0.019	0.030	0.092	0.039	0.055	0.064	0.039	0.041	0.039	0.021	0.027	0.027	
4	0.039	0.033	0.176	0.055	0.055	0.060	0.039	0.043	0.039	0.019	0.027	0.027	
5	0.039	0.037	0.064	0.051	0.060	0.060	0.039	0.039	0.044	0.029	0.027	0.027	
6	0.039	0.039	0.189	0.047	0.058	0.056	0.017	0.037	0.036	0.024	0.027	0.027	
7	0.039	0.036	0.071	0.047	0.071	0.060	0.041	0.036	0.036	0.024	0.027	0.024	
8	0.039	0.033	0.051	0.047	0.064	0.058	0.035	0.036	0.034	0.024	0.027	0.022	
9	0.039	0.033	0.047	0.047	0.064	0.052	0.050	0.037	0.033	0.019	0.027	0.022	
10	0.039	0.054	0.047	0.047	0.064	0.051	0.035	0.036	0.036	0.034	0.027	0.022	
11	0.039	0.042	0.047	0.047	0.064	0.057	0.035	0.033	0.036	0.030	0.027	0.022	
12	0.039	0.039	0.045	0.047	0.064	0.071	0.034	0.035	0.031	0.060	0.027	0.022	
13	0.039	0.036	0.042	0.047	0.064	0.052	0.031	0.033	0.032	0.036	0.027	0.022	
14	0.039	0.033	0.046	0.047	0.064	0.057	0.036	0.033	0.031	0.030	0.027	0.022	
15	1.287	0.030	0.175	0.045	0.064	0.050	0.039	0.033	0.031	0.032	0.027	0.022	
16	0.240	0.027	0.205	0.077	0.067	0.050	0.039	0.033	0.033	0.030	0.027	0.022	
17	0.049	0.027	0.078	0.064	0.064	0.047	0.789	0.033	0.030	0.027	0.027	0.022	
18	0.047	0.027	0.050	0.068	0.064	0.044	0.070	0.031	0.033	0.027	0.027	0.022	
19	0.047	0.027	0.051	0.073	0.064	0.044	0.059	0.030	0.030	0.034	0.027	0.022	
20	0.047	0.027	0.047	0.068	0.059	0.043	0.055	0.721	0.030	0.027	0.027	0.022	
21	0.047	0.027	0.039	0.064	0.228	0.043	0.057	0.057	0.029	0.027	0.027	0.022	
22	0.073	0.042	0.041	0.064	0.073	0.053	0.057	0.054	0.032	0.027	0.027	0.022	
23	0.043	0.439	0.045	0.064	0.073	0.048	0.053	0.054	0.030	0.027	0.027	0.022	
24	0.039	0.634	0.079	0.064	0.073	0.044	0.050	0.054	0.030	0.027	0.027	0.022	
25	0.036	1.962	0.047	0.059	0.073	0.043	0.050	0.043	0.030	0.027	0.027	0.022	
26	0.033	0.370	0.047	0.060	0.073	0.057	0.048	0.041	0.027	0.027	0.027	0.022	
27	0.033	0.295	0.047	0.059	0.073	0.043	0.047	0.041	0.027	0.027	0.027	0.022	
28	0.033	0.078	0.047	0.064	0.071	0.044	0.047	0.038	0.024	0.027	0.027	0.022	
29	0.033		0.043	0.064	0.067	0.043	0.044	0.038	0.024	0.027	0.027	0.022	
30	0.033		0.039	0.059	0.067	0.044	0.046	0.036	0.024	0.029	0.030	0.022	
31	0.033		0.039		0.067		0.044	0.051		0.030		0.022	
MEAN	0.0839	0.1614	0.0818	0.0555	0.0705	0.0523	0.0688	0.0619	0.0324	0.0284	0.0271	0.0231	
INCHES	0.578	1.005	0.564	0.370	0.486	0.349	0.475	0.427	0.216	0.196	0.181	0.160	
STA AV	0.270	0.557	0.546	0.328	0.311	0.905	0.402	0.273	0.324	0.370	0.235	0.227	

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.22244. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 4

LOCATION: Pottawattamie County, Iowa; approximately 3 miles southwest of Treynor; Silver Creek, West Mishnabotna River, Missouri River Basin.

AREA: 150.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														TREYNOR, IOWA WATERSHED 4			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual			
1969	P	0.60	0.85	0.73	4.56	3.92	3.47	4.92	5.01	1.20	4.30	0.09	1.08	30.73			
	Q	0.438	0.453	0.563	0.733	0.801	0.650	0.676	0.651	0.427	0.360	0.311	0.315	6.378			
STA AV	P	0.53	0.57	0.95	3.49	4.09	7.73	3.51	3.33	4.80	2.68	0.67	0.86	33.20			
	Q	0.414	0.427	0.646	0.495	0.564	1.151	0.921	0.603	0.613	0.591	0.513	0.457	7.395			
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																	
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				2 Days		8 Days			
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	1 Day	2 Days	8 Days					
								Date	Vol.	Date	Vol.	Date	Vol.				
1969		8-20	0.037	8-20	0.024	8-20	0.036	8-20	0.044	8-20	0.050	8-20	0.061	2-24	0.087	4-17	0.259
MAXIMUMS FOR PERIOD OF RECORD																	
		6-25	0.296	6-22	0.166	6-20	0.228	2-28	0.352	2-28	0.496	2-28	0.645	2-28	0.758	6-20	1.072
		1966		1964		1967		1965		1965		1965		1965		1967	

NOTES: Watershed conditions: 82% contoured corn above level terraces which have a capacity of 2 inches of runoff; 7% contoured corn below the bottom terraces; 10% grassed terrace back-slopes; 1% gully. Precipitation from rain gage 113 before April 1 and after November 1; Thiessen average of gages 111, 112 and 113 for remainder of year. Precipitation records began January 1, 1964. Runoff records began February 27, 1964. January 1 to February 27, 1964 runoff estimated and included in average. For daily air temperature, in the vicinity, see table for Watershed 3 (71.003). For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1194, p. 71-4-4. For long-time precipitation records, see U.S. Weather Bureau records at Omaha, Nebraska.

1969	DAILY PRECIPITATION (inches)												TREYNOR, IOWA WATERSHED 4	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.10	0.0	0.0	3.53	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.10	0.0	0.02	0.0		
4	0.0	0.0	0.0	1.18	0.0	0.0	0.0	0.05	0.06	0.0	0.0	0.0		
5	0.11	0.0	0.0	0.0	0.45	0.0	0.0	0.0	0.54	0.47	0.0	0.12		
6	0.0	0.0	0.04	0.0	0.08	0.0	0.46	0.0	0.0	0.0	0.0	0.59		
7	0.0	0.0	0.04	0.0	0.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.05	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.0	0.0	0.0	0.0	0.0		
10	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.91	0.02	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.0	0.03	1.00	0.0	0.0	0.0	1.38	0.0	0.0		
13	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.22	0.0	0.03	0.0	0.37	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.09	0.14	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.0		
16	0.0	0.0	0.0	1.30	0.45	0.0	0.08	0.0	0.0	0.0	0.0	0.0		
17	0.10	0.0	0.0	1.03	0.0	0.0	3.48	0.0	0.0	0.0	0.05	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.03	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.44	0.0	0.0		
20	0.0	0.03	0.0	0.0	0.0	0.0	0.0	3.42	0.0	0.0	0.0	0.05		
21	0.0	0.02	0.0	0.0	1.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.03	0.0	0.11	0.0	0.0	0.57	0.0	0.0	0.10	0.0	0.0	0.14		
23	0.0	0.0	0.36	0.0	0.0	0.05	0.0	0.0	0.0	0.05	0.0	0.0		
24	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.02	0.04	0.0	0.0		
25	0.0	0.0	0.0	0.08	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.07	0.0	0.0	0.71	0.0	0.62	0.05	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.31	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10		
28	0.0	0.11	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0		
30	0.0	0.0	0.0	0.0	0.0	0.37	0.04	0.04	0.0	0.16	0.0	0.0		
31	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.92	0.0	0.28	0.0	0.08		
TOTAL	0.60	0.85	0.73	4.56	3.92	3.47	4.92	5.01	1.20	4.30	0.09	1.08		
STA AV	0.53	0.57	0.95	3.49	4.09	7.73	3.51	3.33	4.80	2.68	0.67	0.86		

NOTES: Daily precipitation amounts are Thiessen weighted average values from stations 111, 112 and 113 for period of April 1 through November 1, and from 113 for remainder of year. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 4												
1969	MEAN DAILY DISCHARGE (cfs)											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.083	0.073	0.163	0.104	0.162	0.147	0.132	0.132	0.116	0.073	0.073	0.064
2	0.083	0.073	0.145	0.104	0.147	0.147	0.132	0.142	0.116	0.073	0.073	0.064
3	0.083	0.073	0.118	0.104	0.147	0.147	0.132	0.132	0.116	0.073	0.073	0.064
4	0.083	0.073	0.134	0.154	0.147	0.147	0.132	0.132	0.116	0.068	0.073	0.064
5	0.083	0.083	0.116	0.132	0.153	0.147	0.132	0.132	0.116	0.079	0.068	0.064
6	0.083	0.088	0.144	0.132	0.153	0.147	0.133	0.132	0.104	0.068	0.064	0.064
7	0.083	0.083	0.119	0.124	0.159	0.139	0.124	0.132	0.099	0.064	0.064	0.064
8	0.083	0.083	0.104	0.116	0.178	0.132	0.110	0.132	0.088	0.064	0.064	0.064
9	0.078	0.083	0.104	0.116	0.178	0.132	0.126	0.132	0.083	0.064	0.064	0.064
10	0.073	0.094	0.104	0.116	0.170	0.132	0.116	0.132	0.088	0.076	0.064	0.064
11	0.073	0.083	0.104	0.116	0.163	0.134	0.116	0.124	0.083	0.068	0.064	0.064
12	0.073	0.078	0.104	0.116	0.163	0.151	0.110	0.116	0.083	0.091	0.064	0.064
13	0.073	0.073	0.099	0.116	0.155	0.132	0.104	0.116	0.083	0.078	0.064	0.064
14	0.073	0.073	0.094	0.110	0.147	0.134	0.104	0.116	0.083	0.068	0.064	0.064
15	0.232	0.073	0.096	0.105	0.147	0.132	0.104	0.116	0.083	0.073	0.064	0.064
16	0.170	0.073	0.112	0.164	0.154	0.132	0.107	0.116	0.083	0.073	0.064	0.064
17	0.099	0.073	0.104	0.249	0.155	0.132	0.212	0.116	0.083	0.073	0.064	0.064
18	0.094	0.078	0.104	0.252	0.147	0.132	0.163	0.116	0.083	0.068	0.064	0.064
19	0.094	0.083	0.104	0.219	0.147	0.132	0.163	0.116	0.083	0.076	0.064	0.064
20	0.094	0.083	0.104	0.204	0.147	0.132	0.163	0.391	0.083	0.073	0.064	0.064
21	0.094	0.083	0.104	0.197	0.195	0.132	0.163	0.139	0.083	0.073	0.064	0.064
22	0.095	0.088	0.105	0.197	0.178	0.136	0.163	0.132	0.083	0.073	0.064	0.064
23	0.083	0.171	0.110	0.187	0.178	0.132	0.163	0.124	0.083	0.073	0.064	0.064
24	0.083	0.192	0.181	0.178	0.178	0.132	0.163	0.116	0.083	0.073	0.064	0.064
25	0.078	0.353	0.116	0.173	0.178	0.132	0.159	0.116	0.083	0.073	0.064	0.064
26	0.073	0.145	0.116	0.178	0.178	0.142	0.151	0.116	0.083	0.073	0.064	0.064
27	0.073	0.139	0.116	0.166	0.178	0.132	0.147	0.116	0.083	0.073	0.064	0.064
28	0.073	0.108	0.110	0.163	0.178	0.132	0.139	0.116	0.083	0.073	0.064	0.064
29	0.073		0.104	0.163	0.170	0.132	0.132	0.116	0.078	0.078	0.064	0.064
30	0.073		0.104	0.163	0.163	0.136	0.132	0.116	0.073	0.078	0.064	0.064
31	0.073		0.104		0.155		0.132	0.125		0.083		0.064
MEAN	0.0891	0.1021	0.1144	0.1539	0.1629	0.1366	0.1374	0.1324	0.0896	0.0732	0.0653	0.0640
INCHES	0.438	0.453	0.563	0.733	0.801	0.650	0.676	0.651	0.427	0.360	0.311	0.315
STA AV	0.414	0.427	0.646	0.495	0.564	1.151	0.921	0.603	0.613	0.591	0.513	0.457

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.15868. STA AV based on 6 yr record period.

TREYNOR, IOWA WATERSHED 5

LOCATION: Pottawattamie County, Iowa; approximately 9 miles southeast of Treynor and 3 miles southwest of Macedonia; West Nishnabotna River, Missouri River Basin.

AREA: 389.00 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)								TREYNOR, IOWA WATERSHED 5							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	0.63	0.83	0.87	4.18	3.96	5.57	4.07	3.37	1.29	4.02	0.08	1.23	30.10	
	Q	0.362	0.559	0.515	0.444	0.529	0.689	0.686	0.386	0.274	0.298	0.242	0.222	5.205	
STA AV	P	0.53	0.56	1.26	3.20	3.39	7.02	3.20	3.64	4.32	2.19	0.88	0.97	31.15	
	Q	0.266	0.378	0.619	0.342	0.334	1.204	0.565	0.343	0.481	0.332	0.289	0.273	5.426	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		1 Day		2 Days		8 Days	
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		6-26	0.082	6-26	0.057	6-26	0.086	2-25	0.126	2-25	0.158	2-24	0.181	2-24	0.286
		6-20	1.250	6-20	0.890	6-20	1.271	6-20	1.529	6-20	1.575	6-20	1.636	6-20	1.744
		1967		1967		1967		1967		1967		1967		1967	
MAXIMUMS FOR PERIOD OF RECORD															
		6-20	1.250	6-20	0.890	6-20	1.271	6-20	1.529	6-20	1.575	6-20	1.636	6-20	1.744
		1967		1967		1967		1967		1967		1967		1967	

NOTES: Watershed conditions: Percent crop distribution of area above or below level terraces, respectively is: corn, 31 and 3; beans, 22 and 5; small grain, 10 and 0; hay and clover, 5 and 1; pasture, 13 and 6; and roads and farmsteads, 1 and 3. Precipitation: Before April 5 and after November 1 arithmetic average of rain gages 101 and 108; Thiessen average of seven recording rain gages for remainder of year. Precipitation and runoff records began February 6, 1963. January 1 to February 6, 1963 precipitation and runoff estimated and included in average. For daily air temperature, in the vicinity, see table for Watershed 3 (71.003). For topographic map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1964, USDA Misc. Pub. 1194, p. 71.5-6. For long-time precipitation records, see U.S. Weather Bureau records at Omaha, Nebraska.

1969 DAILY PRECIPITATION (inches)													TREYNOR, IOWA WATERSHED 5	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.28	0.0	0.02	0.0	0.0	0.0
4	0.0	0.0	0.0	1.25	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0
5	0.13	0.0	0.0	0.0	0.69	0.0	0.02	0.0	0.45	0.87	0.0	0.0	0.14	0.0
6	0.0	0.0	0.02	0.0	0.06	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.56	0.0
7	0.0	0.0	0.03	0.0	0.71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.74	0.06	0.0	0.0	0.0
11	0.01	0.0	0.0	0.0	0.0	0.83	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.04	0.75	0.0	0.0	0.0	0.82	0.0	0.0	0.0	0.0
13	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.10	0.0	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.10	0.24	0.0	0.26	0.0	0.0	0.0	0.05	0.0	0.43	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	1.07	0.44	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.14	0.0	0.0	0.83	0.0	0.0	2.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0	0.01	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.67	0.0	0.0	0.0	0.0	0.63	0.0	0.0	0.0	0.0
20	0.0	0.05	0.0	0.05	0.0	0.0	0.0	2.17	0.0	0.0	0.0	0.0	0.06	0.0
21	0.0	0.01	0.0	0.0	1.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.04	0.0	0.37	0.0	0.0	0.80	0.0	0.0	0.12	0.0	0.0	0.0	0.20	0.0
23	0.0	0.0	0.29	0.0	0.0	0.01	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0
24	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.05	0.0	0.0	0.71	0.0	2.24	0.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0
28	0.0	0.09	0.0	0.0	0.0	0.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.15	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.28	0.02	0.0	0.0	0.25	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.02	0.0	0.0	0.97	0.0	0.08	0.0	0.0	0.10	0.0	0.0
TOTAL	0.63	0.83	0.87	4.18	3.96	5.57	4.07	3.37	1.29	4.02	0.08	1.23		
STA AV	0.53	0.56	1.26	3.20	3.39	7.02	3.20	3.64	4.32	2.19	0.88	0.97		

NOTES: Daily precipitation amounts are Thiessen weighted average values from seven stations (101 through 107) for period of April 1 through November 1 and are arithmetic averages from stations 101 and 108 for remainder of the year. STA AV based on 7 yr record period.

TREYNOR, IOWA WATERSHED 5												
1969	MEAN DAILY DISCHARGE (cfs)											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.165	0.122	0.802	0.190	0.176	0.332	0.365	0.243	0.163	0.112	0.141	0.122
2	0.165	0.122	0.446	0.151	0.188	0.356	0.365	0.246	0.159	0.102	0.141	0.122
3	0.165	0.126	0.285	0.153	0.176	0.395	0.392	0.221	0.180	0.094	0.141	0.104
4	0.165	0.131	0.293	0.489	0.165	0.416	0.388	0.248	0.165	0.094	0.141	0.111
5	0.165	0.201	0.260	0.223	0.181	0.379	0.431	0.227	0.223	0.215	0.141	0.122
6	0.165	0.148	0.327	0.210	0.278	0.323	0.656	0.200	0.165	0.122	0.141	0.122
7	0.153	0.129	0.254	0.205	0.371	0.283	0.394	0.195	0.165	0.112	0.141	0.122
8	0.131	0.107	0.209	0.188	0.241	0.259	0.356	0.189	0.159	0.102	0.131	0.122
9	0.112	0.117	0.203	0.169	0.184	0.243	0.532	0.185	0.162	0.102	0.122	0.122
10	0.102	0.275	0.235	0.149	0.179	0.243	0.323	0.176	0.176	0.214	0.148	0.122
11	0.102	0.137	0.232	0.165	0.177	0.243	0.275	0.190	0.187	0.150	0.141	0.108
12	0.102	0.115	0.211	0.165	0.165	0.451	0.259	0.183	0.160	0.330	0.141	0.118
13	0.102	0.112	0.170	0.165	0.181	0.265	0.229	0.173	0.159	0.176	0.131	0.127
14	0.102	0.102	0.171	0.165	0.180	0.243	0.219	0.166	0.154	0.165	0.122	0.116
15	0.467	0.102	0.216	0.176	0.165	0.229	0.230	0.196	0.141	0.214	0.142	0.101
16	1.715	0.102	0.263	0.486	0.181	0.216	0.238	0.195	0.141	0.168	0.143	0.103
17	0.132	0.102	0.277	0.594	0.242	0.216	1.632	0.166	0.141	0.141	0.131	0.113
18	0.094	0.102	0.254	0.344	0.216	0.216	0.394	0.155	0.141	0.141	0.122	0.112
19	0.086	0.102	0.247	0.291	0.374	0.210	0.319	0.150	0.131	0.317	0.122	0.108
20	0.086	0.102	0.222	0.259	0.237	0.204	0.285	0.801	0.131	0.165	0.129	0.102
21	0.086	0.102	0.229	0.224	0.693	0.204	0.287	0.181	0.141	0.155	0.135	0.122
22	0.249	0.171	0.305	0.227	0.453	0.270	0.257	0.154	0.141	0.141	0.128	0.122
23	0.119	0.606	0.381	0.232	0.416	0.275	0.255	0.152	0.131	0.142	0.124	0.122
24	0.086	1.559	0.516	0.232	0.388	0.275	0.247	0.150	0.122	0.148	0.122	0.122
25	0.086	2.934	0.262	0.231	0.361	0.259	0.243	0.154	0.122	0.141	0.122	0.122
26	0.101	0.562	0.223	0.342	0.360	2.226	0.391	0.151	0.122	0.141	0.122	0.109
27	0.158	0.362	0.216	0.271	0.363	0.473	0.264	0.149	0.122	0.141	0.122	0.122
28	0.153	0.284	0.173	0.202	0.341	0.686	0.241	0.148	0.122	0.139	0.122	0.122
29	0.141	0.165	0.188	0.331	0.442	0.243	0.243	0.145	0.122	0.145	0.122	0.122
30	0.131	0.186	0.176	0.341	0.428	0.254	0.254	0.135	0.122	0.179	0.122	0.122
31	0.122	0.180	0.335	0.335	0.335	0.250	0.250	0.280	0.162	0.162	0.122	0.122
MEAN	0.1906	0.3263	0.2713	0.2421	0.2787	0.3754	0.3619	0.2034	0.1491	0.1571	0.1318	0.1171
INCHES	0.362	0.559	0.515	0.444	0.529	0.689	0.686	0.386	0.274	0.298	0.242	0.222
STA AV	0.266	0.378	0.619	0.342	0.334	1.204	0.565	0.343	0.481	0.332	0.289	0.273

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.06119. STA AV based on 7 yr record period.

COTTONWOOD, SOUTH DAKOTA WATERSHED H-2

LOCATION: Jackson County, South Dakota; approximately 3 miles east southeast of Cottonwood, Bad River Basin.

AREA: 2.13 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														COTTONWOOD, SOUTH DAKOTA WATERSHED H-2																		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																		
1969	P	0.23	0.86	0.31	1.60	2.52	2.12	4.64	0.61	1.23	1.13	0.10	0.32	15.67																		
	Q	0.0	0.0	1.571	0.0	0.019	0.0	0.310	0.0	0.0	0.0	0.0	0.0	1.900																		
STA AV	P	0.26	0.29	0.61	1.93	2.79	4.02	1.61	1.24	1.26	0.50	0.19	0.43	15.13																		
	Q	0.078	0.0	0.325	0.005	0.191	0.402	0.060	0.015	0.015	0.0	0.0	0.0	1.091																		
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																																
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days										
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.													
1969		7-20	0.629	7-20	0.203	3-17	0.271	3-18	0.639	3-18	0.871	3-18	0.939	3-17	1.462	3-11	1.571															
MAXIMUMS FOR PERIOD OF RECORD																																
		5-30	3.577	5-30	0.608	5-30	0.629	5-30	1.129	5-30	1.129	5-30	1.129	5-30	1.129	3-17	1.462	3-11	1.571													
		1963		1963		1963		1963		1963		1963		1963		1969																

NOTES: Watershed conditions: 100% heavily grazed rangeland. Vegetative cover in late July was 2290 lbs./acre (oven-dry weight). For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 72.1-5. For temperature information, see table of maximum and minimum values included for Watershed 72.005. Arithmetic mean of rain gages RH-1, RH-2, RH-3 and RH-4. Precipitation and runoff records began January 1963. Precipitation and runoff STA AV based on 7 yr record period. For long-time precipitation records, see U.S. Weather Station records at Cottonwood, South Dakota.

1969 DAILY PRECIPITATION (inches)														COTTONWOOD, SOUTH DAKOTA WATERSHED H-2													
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec														
	1	0.0	0.04S	0.08S	0.0	0.02	0.0	0.0	0.03	0.0	0.34S	0.0	0.0														
	2	0.01S	0.0	0.05S	0.0	0.0	0.0	0.06	0.01	0.0	0.19S	0.0	0.0														
	3	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.04S	0.0	0.0														
	4	0.0	0.0	0.0	0.0	0.19	0.0	0.0	0.0	0.0	0.34S	0.0	0.0														
	5	0.03S	0.0	0.0	0.0	0.02	0.0	0.07	0.0	0.0	0.0	0.0	0.03S														
	6	0.0	0.0	0.01S	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.02S														
	7	0.0	0.10S	0.0	0.08	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.03S														
	8	0.0	0.0	0.0	0.75	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0														
	9	0.0	0.0	0.02S	0.02	0.0	0.0	0.07	0.0	0.0	0.06S	0.0	0.0														
	10	0.0	0.0	0.0	0.0	0.0	0.50	0.29	0.0	0.0	0.0	0.0	0.02S														
	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05S	0.02S														
	12	0.0	0.0	0.02S	0.03	0.0	0.0	0.0	0.04	0.0	0.02S	0.0	0.0														
	13	0.0	0.31S	0.02S	0.0	0.0	0.42	0.0	0.0	0.0	0.09S	0.01S	0.0														
	14	0.0	0.0	0.0	0.10	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0														
	15	0.02S	0.0	0.0	0.18	1.66	0.0	0.18	0.0	0.0	0.0	0.0	0.0														
	16	0.0	0.0	0.0	0.07	0.02	0.0	0.34	0.0	0.0	0.0	0.0	0.03S														
	17	0.09S	0.0	0.0	0.0	0.0	0.0	0.83	0.0	0.0	0.0	0.04S	0.0														
	18	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.81	0.0	0.0	0.0														
	19	0.0	0.13S	0.04S	0.0	0.10	0.0	0.59	0.0	0.0	0.0	0.0	0.0														
	20	0.0	0.15S	0.0	0.0	0.0	0.0	1.91	0.0	0.0	0.0	0.0	0.0														
	21	0.0	0.02S	0.0	0.0	0.29	0.03	0.0	0.0	0.0	0.0	0.0	0.01S														
	22	0.04S	0.0	0.0	0.0	0.0	0.47	0.0	0.0	0.13	0.0	0.0	0.04S														
	23	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0														
	24	0.0	0.0	0.0	0.0	0.0	0.55	0.0	0.0	0.01	0.0	0.0	0.0														
	25	0.0	0.0	0.0	0.20	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0														
	26	0.01S	0.09S	0.06S	0.10	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.05S														
	27	0.03S	0.02S	0.0	0.07	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.03S														
	28	0.0	0.0	0.01S	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.02S														
	29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.01	0.0	0.02S														
	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.28	0.04S	0.0	0.0														
	31	0.0	0.0	0.0	0.07	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0														
	TOTAL	0.23	0.86	0.31	1.60	2.52	2.12	4.64	0.61	1.23	1.13	0.10	0.32														
	STA AV	0.26	0.29	0.61	1.93	2.79	4.02	1.61	1.24	1.26	0.50	0.19	0.43														

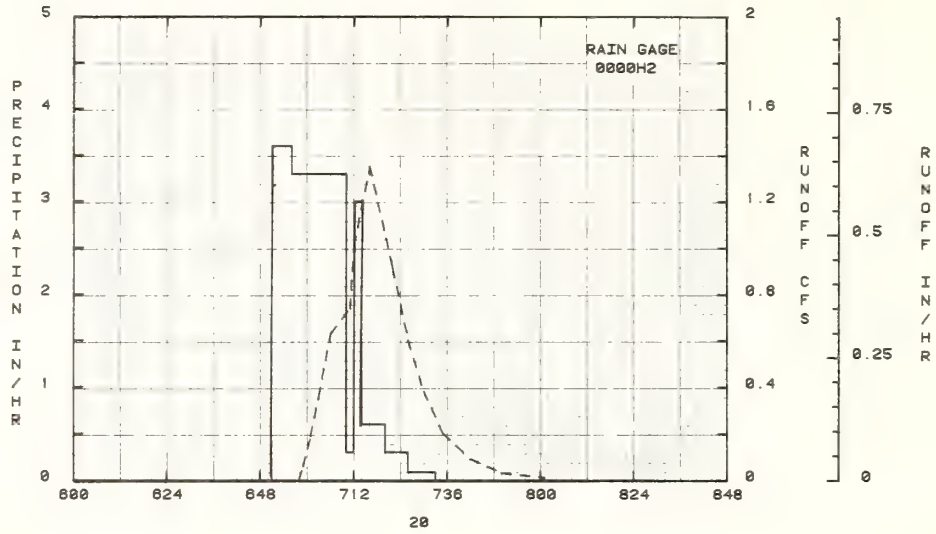
NOTES: Arithmetic mean of rain gages RH-1, RH-2, RH-3 and RH-4. STA AV based on 7 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) COTTONWOOD, SOUTH DAKOTA WATERSHED H-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.006	0.0	0.002	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.048	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.049	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.028	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0	0.0	0.0045	0.0	0.0001	0.0	0.0009	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	1.571	0.0	0.019	0.0	0.310	0.0	0.0	0.0	0.0	0.0
STA AV	0.078	0.0	0.325	0.005	0.191	0.402	0.060	0.015	0.015	0.0	0.0	0.0

NOTES: STA AV based on 7 yr record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 11.1745.

1969 SELECTED RUNOFF EVENT COTTONWOOD, SOUTH DAKOTA WATERSHED H-2										
ANTECEDENT CONDITIONS			RAINFALL							
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF JULY 20, 1969										
7-20	RG 0000H2	0.0	7-20	RG 0000H2	0.0	0.0	7-20	658	0.0	0.0
	0.0	0.0		651	0.0	0.0		659	0.06	0.0002
				656	3.6000	0.30		701	0.19	0.0023
				702	3.3000	0.63		703	0.36	0.0063
				710	3.3000	1.07		706	0.63	0.0179
				712	0.3000	1.08				
WATERSHED CONDITIONS:				714	3.0001	1.18		711	0.74	0.0440
100% heavily grazed range-				720	0.6000	1.24		712	1.01	0.0519
land; vegetative cover				726	0.3000	1.27		716	1.35	0.0884
in late July was 2290				733	0.0857	1.28		722	0.91	0.1398
lbs./acre (over-dry								726	0.60	0.1632
weight).										
								730	0.38	0.1793
								735	0.20	0.1904
								742	0.09	0.1983
								750	0.03	0.2021
								801	0.01	0.2040

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.4656.



COTTONWOOD, SOUTH DAKOTA WATERSHED L-2

LOCATION: Jackson County, South Dakota; approximately 3 miles east southeast of Cottonwood, Bad River Basin.

AREA: 2.38 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														COTTONWOOD, SOUTH DAKOTA WATERSHED L-2											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	0.28	0.68	0.27	1.61	2.52	2.04	5.11	0.67	1.06	1.13	0.11	0.28	15.76											
	Q	0.0	0.0	0.845	0.0	0.0	0.0	0.031	0.0	0.0	0.0	0.0	0.0	0.876											
STA AV	P	0.25	0.27	0.57	1.91	2.78	4.00	1.64	1.25	1.26	0.50	0.19	0.34	14.95											
	Q	0.0	0.0	0.361	0.0	0.039	0.281	0.005	0.0	0.0	0.0	0.0	0.0	0.686											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval						1 Day		2 Days		8 Days							
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.
1969		3-17	0.061	3-17	0.061	3-16	0.121	3-16	0.247	3-16	0.466	3-16	0.681	3-16	0.681	3-16	0.820	3-10	0.844						
MAXIMUMS FOR PERIOD OF RECORD																									
		6-15	0.542	6-15	0.388	6-15	0.540	6-15	1.073	6-15	1.164	6-15	1.243	6-15	1.243	3-8	1.544								
		1963		1963		1963		1963		1963		1963		1963		1966									

NOTES: Watershed conditions: 100% lightly grazed rangeland. Vegetative cover in late July was 2395 lbs./acre (oven-dry weight). For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 72.2-4. For temperature information, see table of maximum and minimum values included for Watershed 72.005. Arithmetic mean of rain gages RL-1, RL-2, RL-3 and RL-4. Precipitation and runoff records began January 1963. Precipitation and runoff STA AV based on 7 yr record period. For long-time precipitation records, see U.S. Weather Station records at Cottonwood, South Dakota.

1969 DAILY PRECIPITATION (inches)														COTTONWOOD, SOUTH DAKOTA WATERSHED L-2											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.0	0.04S	0.05S	0.0	0.03	0.0	0.0	0.03	0.0	0.32	0.0	0.0													
2	0.01S	0.0	0.03S	0.0	0.0	0.0	0.03	0.02	0.0	0.14	0.0	0.0													
3	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.05	0.0	0.0													
4	0.02S	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.35	0.0	0.0													
5	0.03S	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.03S													
6	0.0	0.0	0.01S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03S													
7	0.0	0.07S	0.02S	0.09	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.02S													
8	0.02S	0.0	0.02S	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
9	0.0	0.0	0.02S	0.03	0.0	0.0	0.07	0.0	0.0	0.05S	0.0	0.0													
10	0.0	0.0	0.02S	0.0	0.0	0.53	0.23	0.0	0.0	0.0	0.0	0.04S													
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04S	0.0													
12	0.0	0.0	0.01S	0.02	0.0	0.0	0.0	0.07	0.0	0.03S	0.0	0.0													
13	0.0	0.0	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.14S	0.04S	0.0													
14	0.0	0.24S	0.0	0.08	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0													
15	0.02S	0.0	0.0	0.16	1.58	0.0	0.19	0.0	0.0	0.0	0.0	0.0													
16	0.0	0.0	0.0	0.09	0.03	0.0	0.55	0.0	0.0	0.0	0.0	0.03S													
17	0.09S	0.0	0.0	0.0	0.0	0.0	0.61	0.0	0.61	0.0	0.03S	0.0													
18	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
19	0.0	0.09S	0.05S	0.0	0.13	0.0	0.78	0.0	0.0	0.0	0.0	0.0													
20	0.0	0.13S	0.0	0.0	0.0	0.0	2.18	0.0	0.0	0.0	0.0	0.0													
21	0.0	0.03S	0.0	0.0	0.28	0.04	0.0	0.0	0.0	0.0	0.0	0.02S													
22	0.05S	0.0	0.0	0.0	0.0	0.45	0.0	0.0	0.14	0.0	0.0	0.03S													
23	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0													
24	0.0	0.0	0.0	0.0	0.0	0.50	0.0	0.0	0.02	0.0	0.0	0.0													
25	0.0	0.0	0.0	0.18	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0													
26	0.01S	0.06S	0.03S	0.07	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.04S													
27	0.0	0.02S	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04S													
28	0.0	0.0	0.01S	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0													
29	0.03S		0.0	0.0	0.0	0.0	0.0	0.44	0.0	0.01S	0.0	0.0													
30	0.0		0.0	0.0	0.0	0.0	0.0	0.05	0.29	0.04S	0.0	0.0													
31	0.0		0.0		0.08		0.16	0.02		0.0		0.0													
TOTAL	0.28	0.68	0.27	1.61	2.52	2.04	5.11	0.67	1.06	1.13	0.11	0.28													
STA AV	0.25	0.27	0.57	1.91	2.78	4.00	1.64	1.25	1.26	0.50	0.19	0.34													

NOTES: Arithmetic mean of rain gages RL-1, RL-2, RL-3 and RL-4. STA AV based on 7 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) COTTONWOOD, SOUTH DAKOTA WATERSHED L-2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0 T	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEAN	0.0	0.0	0.0027	0.0	0.0	0.0	0.0001	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	0.845	0.0	0.0	0.0	0.031	0.0	0.0	0.0	0.0	0.0
STA AV	0.0	0.0	0.361	0.0	0.039	0.281	0.005	0.0	0.0	0.0	0.0	0.0

NOTES: STA AV based on 7 yr record period. To convert mean daily discharge in CFS to IN/DAY, multiply by 10.0007.

COTTONWOOD, SOUTH DAKOTA WATERSHED N-1

LOCATION: Jackson County, South Dakota; approximately 3 miles east southeast of Cottonwood, Bad River Basin.

AREA: 2.35 acres

MONTHLY PRECIPITATION AND RUNOFF (inches)														COTTONWOOD, SOUTH DAKOTA WATERSHED N-1															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	0.32	0.82	0.36	1.57	2.62	2.00	4.88	0.65	1.15	1.23	0.12	0.29	16.01															
	Q	0.0	0.0	1.061	0.0	0.030	0.0	0.077	0.0	0.0	0.0	0.0	0.0	1.169															
STA AV	P	0.27	0.28	0.60	1.94	2.80	4.04	1.63	1.24	1.23	0.53	0.21	0.44	15.20															
	Q	0.0	0.0	0.425	0.0	0.193	0.267	0.012	0.002	0.0	0.0	0.0	0.0	0.898															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval		6 Hours		12 Hours		1 Day		2 Days		8 Days											
		Date	Rate	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.										
1969		7-20	0.118	3-16	0.087	3-16	0.172	3-16	0.434	3-16	0.625	3-16	0.865	3-16	1.043	3-10	1.061												
MAXIMUMS FOR PERIOD OF RECORD																													
		5-30	2.030	5-30	0.710	5-30	0.760	5-30	1.122	5-30	1.122	5-30	1.122	3- 8	1.538	3- 8	1.913												
		1963		1963		1963		1963		1963		1963		1966		1966													

NOTES: Watershed conditions: 100% moderately grazed rangeland. Vegetative cover in late July was 1982 lbs./acre (oven-dry weight). For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 72.5-7. Arithmetic mean of rain gages RM-1, RM-2, RM-3 and RM-4. Precipitation and runoff records began January 1963. Precipitation and runoff STA AV based on 7 yr record period. For long-time precipitation records, see U.S. Weather Station records at Cottonwood, South Dakota.

1969 DAILY AIR TEMPERATURE (degrees F)														COTTONWOOD, SOUTH DAKOTA WATERSHED N-1													
Day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec														
		max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min										
1		35	-8	43	-8	32	4	72	39	72	35	60	43	90	47	85	56	86	43	73	47	47	22	64	24		
2		24	5	33	-2	31	22	77	32	72	36	72	32	91	58	90	50	90	55	83	39	40	30	52	19		
3		13	-22	45	4	25	17	82	42	82	52	83	46	97	60	95	60	90	60	82	44	47	9	40	13		
4		37	-15	47	5	27	-7	80	37	79	51	86	54	93	55	92	60	90	62	55	36	66	20	43	11		
5		46	25	43	8	35	0	68	22	70	45	98	50	76	53	99	55	83	48	60	33	75	30	38	28		
6		38	21	31	1	26	4	83	39	76	44	96	63	88	55	99	67	84	42	61	32	74	24	38	24		
7		45	21	19	9	19	7	80	49	65	38	83	55	90	61	90	48	82	42	64	33	73	24	30	14		
8		44	5	34	-12	23	-10	61	41	79	33	74	54	90	56	98	53	81	46	76	24	65	27	24	11		
9		22	-9	33	-5	20	9	55	40	75	34	80	50	90	59	96	50	86	51	76	44	62	27	26	10		
10		21	-1	41	15	22	-1	70	32	67	33	79	54	89	53	101	52	85	46	64	32	61	20	25	10		
11		16	3	35	8	39	-11	78	38	81	27	62	44	97	52	106	53	89	40	58	30	55	34	36	7		
12		21	10	30	-7	30	8	81	49	85	30	60	36	103	60	102	72	94	52	37	24	56	33	51	10		
13		30	5	34	18	24	8	75	50	89	38	58	36	90	62	100	59	94	51	37	25	43	11	55	25		
14		37	14	34	24	34	-6	68	43	89	51	67	30	100	59	96	44	91	53	42	14	35	10	51	9		
15		31	23	28	2	43	-4	61	40	82	47	75	36	90	62	100	54	90	48	47	22	57	17	41	3		
16		27	14	32	21	52	27	60	39	64	43	76	45	91	65	106	53	77	41	45	18	50	25	48	12		
17		39	19	33	23	56	29	57	34	76	31	83	45	82	62	102	61	84	50	47	13	45	15	53	19		
18		27	7	36	23	56	25	71	28	72	37	86	50	85	62	86	57	83	51	49	28	37	0	46	10		
19		44	5	31	16	52	27	72	46	65	48	83	53	84	63	91	63	87	60	60	25	52	13	28	10		
20		32	5	32	26	47	24	71	47	53	42	68	47	82	60	98	58	91	62	63	25	62	15	43	18		
21		16	2	31	20	55	21	69	30	63	45	79	47	87	60	96	65	89	63	59	34	67	25	43	26		
22		8	0	26	-7	54	29	69	29	63	39	79	55	85	63	96	60	75	51	60	33	55	27	33	21		
23		0	-10	33	20	47	24	73	32	75	40	78	54	85	58	95	62	74	32	67	22	55	15	30	15		
24		2	-20	38	23	43	26	77	50	83	44	76	48	89	54	96	62	79	40	56	29	57	24	46	10		
25		8	-23	39	20	37	22	75	36	86	57	75	52	91	60	95	60	76	47	43	32	55	13	43	14		
26		24	-4	37	33	46	18	51	33	94	56	69	53	91	65	94	60	82	35	40	20	39	18	35	0		
27		25	-1	33	25	66	21	39	30	100	63	76	53	81	56	100	62	78	36	46	9	47	9	25	15		
28		2	-9	27	-3	59	13	53	28	96	60	78	49	86	47	105	60	92	51	55	22	49	12	19	-5		
29		8	-5			27	12	78	30	86	42	80	50	88	62	100	71	77	46	47	37	56	17	22	-11		
30		15	-19			37	16	78	41	95	61	81	52	88	63	81	57	87	51	40	33	63	24	34	-3		
31		26	-9			75	23			94	53			85	47	78	46			52	25			32	-5		
AV.		24	1	34	10	40	12	69	37	78	43	76	47	88	58	95	57	84	48	56	28	54	19	38	11		
MEAN		12.8		22.5		26.4		53.5		61.1		62.3		73.5		76.8		66.7		42.4		37.3		25.2			
STA AV		32	6	36	9	45	18	61	32	71	42	81	52	91	59	89	55	79	46	65	33	49	20	36	10		

NOTES: Temperature data from U.S. Weather Station records at Cottonwood, South Dakota for 24 hour period ending at 1700. STA AV based on 60 yr record period

1969 DAILY PRECIPITATION (inches) COTTONWOOD, SOUTH DAKOTA WATERSHED M-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.05S	0.09S	0.0	0.03	0.0	0.0	0.03	0.0	0.35	0.0	0.0
2	0.02S	0.0	0.06S	0.0	0.0	0.0	0.04	0.01	0.0	0.19	0.0	0.0
3	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.0	0.0	0.04	0.0	0.0
4	0.01S	0.0	0.0	0.0	0.21	0.0	0.0	0.0	0.0	0.33	0.0	0.0
5	0.03S	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.02S
6	0.03S	0.0	0.02S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03S
7	0.0	0.11S	0.02S	0.07	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.02S
8	0.0	0.0	0.0	0.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.03S	0.02	0.0	0.0	0.08	0.0	0.0	0.06S	0.0	0.0
10	0.0	0.0	0.02S	0.0	0.0	0.51	0.27	0.0	0.0	0.0	0.0	0.02S
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04S	0.02S
12	0.0	0.0	0.03S	0.03	0.0	0.0	0.0	0.06	0.0	0.02S	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.20S	0.02S	0.0
14	0.0	0.25S	0.0	0.08	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0
15	0.02S	0.0	0.0	0.15	1.68	0.0	0.19	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.08	0.03	0.0	0.62	0.0	0.0	0.0	0.0	0.02S
17	0.08S	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.75	0.0	0.06S	0.0
18	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.10S	0.04S	0.0	0.15	0.0	0.68	0.0	0.0	0.0	0.0	0.0
20	0.0	0.16S	0.0	0.0	0.0	0.0	1.99	0.0	0.0	0.0	0.0	0.0
21	0.0	0.03S	0.0	0.0	0.29	0.03	0.0	0.0	0.0	0.0	0.0	0.02S
22	0.05S	0.0	0.0	0.0	0.0	0.45	0.0	0.0	0.13	0.0	0.0	0.04S
23	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.51	0.0	0.0	0.01	0.0	0.0	0.0
25	0.0	0.0	0.0	0.19	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0
26	0.03S	0.09S	0.04S	0.09	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.04S
27	0.0	0.03S	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03S
28	0.0	0.0	0.01S	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.01S
29	0.05S		0.0	0.0	0.0	0.0	0.0	0.45	0.0	0.01S	0.0	0.02S
30	0.0		0.0	0.0	0.0	0.0	0.0	0.05	0.26	0.03S	0.0	0.0
31	0.0		0.0		0.07		0.10	0.02		0.0		0.0
TOTAL	0.32	0.82	0.36	1.57	2.62	2.00	4.88	0.65	1.15	1.23	0.12	0.29
STA AV	0.27	0.28	0.60	1.94	2.80	4.04	1.63	1.24	1.23	0.53	0.21	0.44

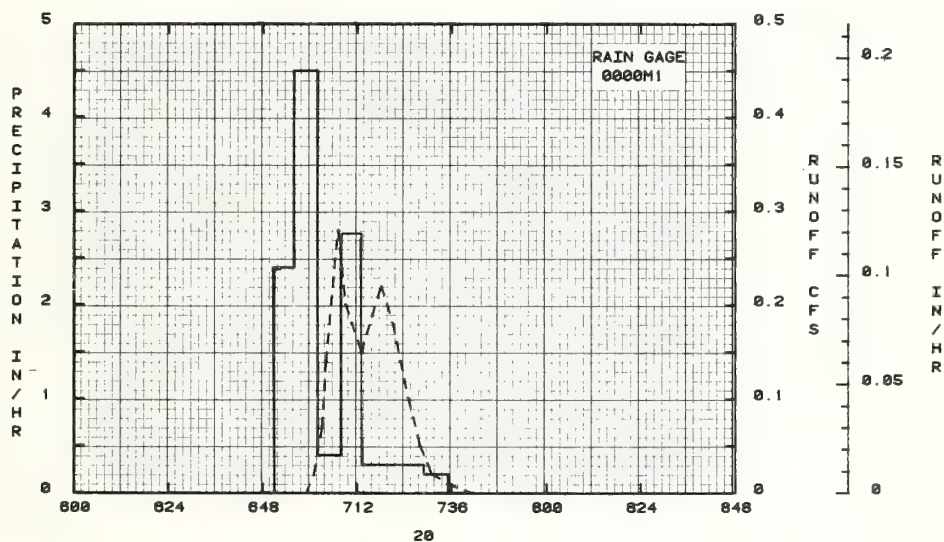
NOTES: Arithmetic mean of rain gages RM-1, RM-2, RM-3 and RM-4. STA AV based on 7 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) COTTONWOOD, SOUTH DAKOTA WATERSHED M-1												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.030	0.0	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.061	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.008	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0		0.0		0.0		0.0	0.0		0.0		0.0
MEAN	0.0	0.0	0.0034	0.0	0.0001	0.0	0.0002	0.0	0.0	0.0	0.0	0.0
INCHES	0.0	0.0	1.061	0.0	0.030	0.0	0.077	0.0	0.0	0.0	0.0	0.0
STA AV	0.0	0.0	0.425	0.0	0.193	0.267	0.012	0.002	0.0	0.0	0.0	0.0

NOTES: STA AV based on 7 yr record period. To convert mean daily discharge in CFS to IN/HR, multiply by 10.1283.

1969 SELECTED RUNOFF EVENT			COTTONWOOD, SOUTH DAKOTA WATERSHED N-1						
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF		
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)
EVENT OF JULY 20, 1969									
RG 0000M1			RG 0000M1						
7-20	0.0	0.0	7-20	651	0.0	0.0	7-20	659	0.0
				656	2.4000	0.20		701	0.02
				702	4.5000	0.65		703	0.07
				708	0.4000	0.69		704	0.14
				713	2.7600	0.92		707	0.28
WATERSHED CONDITIONS: 100% moderately grazed rangeland; vegetative cover in late July was 1982 lbs. per acre (oven-dry weight).				729	0.3000	1.00		709	0.20
				735	0.2000	1.02		713	0.15
								718	0.22
								721	0.18
								725	0.10
								728	0.05
								731	0.02
								735	0.01
								741	0.0
									0.0321

NOTES: To convert runoff in CFS to IN/HR, multiply by 0.4220.



EVENT OF JULY 20, 1969
COTTONWOOD, SOUTH DAKOTA WATERSHED N-1

AHOSKIE, NORTH CAROLINA WATERSHED W-A1

LOCATION: Hertford, Bertie, and Northampton Counties, North Carolina; approximately 3/4 mile southwest of Ahoskie; Chowan River Basin.

AREA: 36480.00 acres 57.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														AHOSKIE, NORTH CAROLINA WATERSHED W-A1											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual											
1969	P	2.24	3.49	4.57	2.56	5.37	4.65	8.32	4.54	5.11	4.11	2.07	4.49	51.52											
	Q	0.973	2.637	4.195	0.992	2.199	1.157	1.772	2.478	0.679	2.284	0.360	2.479	22.204											
STA AV	P	3.34	3.15	3.23	2.03	4.08	4.69	5.76	4.85	2.90	2.20	1.71	2.97	40.91											
	Q	1.921	2.123	2.918	0.766	0.965	0.933	1.316	1.430	0.361	0.578	0.203	0.963	14.475											
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																									
		Maximum Discharge Date Rate		1 Hour Date Vol.		2 Hours Date Vol.		Maximum Volume for Selected Time Interval 6 Hours Date Vol.		12 Hours Date Vol.		1 Day Date Vol.		2 Days Date Vol.		8 Days Date Vol.									
1969		1- 1	0.0	1- 1	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0
MAXIMUMS FOR PERIOD OF RECORD																									
		10- 5	0.070	10- 5	0.070	10- 5	0.140	10- 5	0.420	10- 5	0.830	10- 5	1.650	10- 5	3.020	10- 3	4.140								
		1964		1964		1964		1964		1964		1964		1964		1964									

NOTES: Watershed conditions: Woodland, 65%; row crops, 30%; pasture, 2%; roads, urban, and homesites, 3%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 75.1-8. Records of precipitation began in 1964. Records of runoff began in 1950. STA AV computed on 1965-69 data. Precipitation Thiessen weighted using 10 gages. For long-time precipitation records, see U.S. Weather Bureau records at Scotland Neck, North Carolina.

1969 DAILY AIR TEMPERATURE (degrees F)														AHOSKIE, NORTH CAROLINA WATERSHED W-A1											
Day		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
		max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min	max min												
1		49 29	64 42	43 31	NR NR	67 39	NR 60	NR 71	86 70	89 58	82 52	69 56	53 24												
2		39 17	55 43	42 30	NR NR	71 36	NR 64	NR 69	84 69	87 69	78 66	75 59	48 20												
3		46 19	60 38	50 25	NR NR	79 40	NR 65	NR 68	87 70	86 65	83 67	77 52	56 33												
4		42 27	46 25	NR NR	NR NR	85 51	NR 54	NR 66	84 66	88 60	82 59	69 55	50 24												
5		30 15	59 37	51 25	NR NR	86 50	NR 56	NR 69	79 67	89 64	72 55	61 44	48 19												
6		45 10	59 34	56 28	NR NR	86 58	NR 57	NR 74	84 63	88 64	77 51	60 36	46 18												
7		44 28	55 41	50 31	NR NR	88 52	NR 64	NR 69	88 61	90 69	78 54	60 35	53 30												
8		43 25	54 31	58 25	NR NR	88 59	NR NR	NR 68	89 67	87 68	81 57	56 37	51 43												
9		65 30	50 38	56 34	NR NR	84 67	NR 64	NR 63	88 72	82 65	76 59	52 43	49 42												
10		63 26	47 19	47 29	NR NR	75 44	NR 62	NR 66	88 71	82 60	78 48	63 44	65 40												
11		43 18	58 21	45 26	NR NR	71 48	NR 62	NR 70	85 66	76 52	78 55	65 35	65 45												
12		36 14	55 33	43 22	NR NR	NR 38	NR 65	NR 64	84 66	76 49	79 54	58 42	55 34												
13		38 13	49 23	50 22	NR NR	78 NR	NR 65	NR 63	85 65	82 45	78 62	56 33	48 27												
14		41 20	39 17	53 21	NR NR	81 46	85 66	87 62	87 67	83 46	82 66	64 43	51 25												
15		44 20	38 13	52 23	NR NR	79 57	86 89	88 61	88 67	83 52	80 53	60 26	48 33												
16		48 15	39 26	57 24	NR NR	77 47	78 65	88 61	90 65	85 59	71 45	55 22	44 23												
17		56 22	44 31	67 25	NR NR	81 46	82 60	91 65	89 71	85 62	72 53	64 23	41 16												
18		71 29	41 32	65 46	NR NR	80 52	84 63	93 69	90 71	76 66	70 32	66 39	45 17												
19		66 51	52 28	64 46	NR NR	76 63	84 65	95 70	89 73	72 60	77 37	72 41	49 32												
20		53 37	50 32	75 35	NR NR	81 64	90 63	93 72	88 71	70 58	84 50	66 28	NR NR												
21		50 40	42 35	72 56	NR NR	81 62	88 64	92 73	80 57	74 59	81 68	44 22	47 17												
22		45 36	44 35	69 28	NR NR	80 52	81 63	91 69	81 52	74 55	75 41	56 20	57 37												
23		46 40	46 37	65 28	NR NR	80 52	90 69	90 72	83 52	76 44	71 36	67 37	45 22												
24		58 41	52 37	61 43	NR NR	80 55	91 72	85 68	85 51	NR 49	57 27	63 51	45 26												
25		58 40	50 30	68 60	NR NR	82 62	92 68	NR NR	88 56	78 NR	67 28	60 26	41 26												
26		51 26	48 33	63 38	NR NR	77 62	92 70	85 65	90 58	79 58	72 59	63 35	42 29												
27		42 21	46 23	54 31	NR NR	75 53	90 64	90 70	87 57	81 55	76 55	63 26	44 27												
28		45 25	50 21	60 24	NR NR	79 47	93 70	88 75	84 51	80 59	66 46	51 25	54 28												
29		53 33		74 43	NR NR	89 57	94 73	87 69	84 54	73 50	58 31	56 34	52 27												
30		68 38		72 46	NR NR	93 63	NR 66	89 68	87 56	73 40	66 36	48 27	74 39												
31		70 54		59 32		91 67		89 72	88 56		74 45		69 47												
AV.		50 27	49 30	58 32	NR NR	80 53	87 65	89 68	86 63	80 57	74 50	61 36	51 29												
MEAN		38.9	40.2	45.3	NR	66.9	73.1	75.9	74.7	69.1	62.4	49.0	40.1												
STA AV		51 28	53 31	62 37	73 46	80 54	86 61	89 66	87 64	82 58	73 47	63 37	52 30												

NOTES: Temperature data from U.S. Weather Bureau Station records at Lewiston, North Carolina. STA AV based on 16 yr record period.

1969	DAILY PRECIPITATION (inches)						ABOSKIE, NORTH CAROLINA WATERSHED W-A1					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.75	1.09	0.0	0.0	0.0	0.47	0.0	0.0	0.0	0.08	0.0
2	0.0	1.34	0.54	0.0	0.0	0.26	0.01	0.0	0.11	3.74	1.23	0.0
3	0.0	0.0	0.0	0.0	0.0	0.24	0.71	0.75	0.0	0.03	0.0	0.0
4	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.85	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.31	0.0	0.0	0.0	1.09	0.09	0.0	0.0	0.0
6	0.0	0.03	0.69	0.48	0.0	0.0	1.71	0.0	0.0	0.0	0.0	0.0
7	0.0	0.05	0.49	0.0	0.0	0.0	0.89	0.0	0.04	0.0	0.0	0.80
8	0.0	0.42	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.15	0.0
9	0.0	0.23	0.44	0.0	0.08	0.11	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.04	0.0	0.22	0.0	0.0	0.0	0.56	0.0	0.0	0.0	1.30
11	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.01	0.20	0.0	0.0	0.0	0.27	0.0
13	0.0	0.0	0.0	0.0	0.0	1.05	0.0	0.04	0.0	0.26	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.24	0.0	0.08	0.0	0.31
15	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.67	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.63	0.0	0.32	0.0	0.25	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.94	0.0	0.0	0.0
18	0.0	0.0	0.16	0.37	0.0	0.69	0.0	0.0	0.11	0.0	0.0	0.0
19	0.63	0.0	0.94	0.20	1.68	1.30	0.0	0.0	0.01	0.0	0.30	0.0
20	1.43	0.0	0.0	0.0	1.53	0.0	0.0	0.09	2.13	0.0	0.0	0.0
21	0.17	0.0	0.0	0.0	0.0	0.0	0.59	0.0	0.10	0.0	0.0	0.69
22	0.01	0.0	0.0	0.16	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0
23	0.0	0.63	0.0	0.0	0.0	0.0	1.21	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.22	0.0	0.0	0.08	0.24	0.0	0.0	0.0	0.0	0.34
25	0.0	0.0	0.0	0.0	1.72	0.0	0.20	0.0	0.12	0.0	0.0	1.05
26	0.0	0.0	0.0	0.0	0.36	0.0	0.03	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.75	0.0	0.0	0.0	0.04	0.0
29	0.0	0.0	0.0	0.06	0.0	0.0	0.82	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0
TOTAL	2.24	3.49	4.57	2.56	5.37	4.65	8.32	4.54	5.11	4.11	2.07	4.49
STA AV	3.34	3.15	3.23	2.03	4.08	4.69	5.76	4.85	2.90	2.20	1.71	2.97

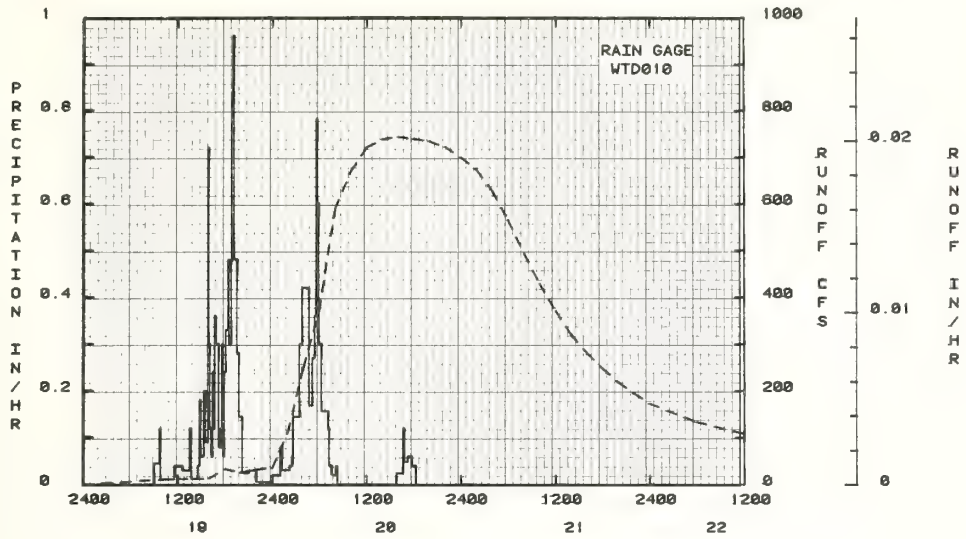
NOTES: Precipitation values are Thiessen weighted averages of 10 gages. STA AV based on 5 yr record period.

1969	MEAN DAILY DISCHARGE (cfs)						ABOSKIE, NORTH CAROLINA WATERSHED W-A1					
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	17.0	63.0	68.0	33.0	18.0	28.0	14.0	51.0	10.0	15.0	9.4	13.0
2	18.0	691.0	530.0	30.0	17.0	28.0	15.0	50.0	10.0	133.0	34.0	12.0
3	16.0	824.0	504.0	28.0	15.0	39.0	29.0	46.0	9.4	800.0	46.0	13.0
4	15.0	369.0	334.0	27.0	15.0	32.0	54.0	226.0	9.1	1000.0	31.0	12.0
5	14.0	211.0	208.0	27.0	14.0	24.0	34.0	605.0	8.8	718.0	26.0	12.0
6	14.0	141.0	139.0	61.0	14.0	20.0	60.0	688.0	8.5	270.0	22.0	12.0
7	13.0	110.0	810.0	96.0	14.0	18.0	477.0	427.0	8.2	117.0	19.0	13.0
8	12.0	90.0	560.0	69.0	13.0	17.0	474.0	143.0	8.8	71.0	18.0	26.0
9	11.0	266.0	352.0	54.0	13.0	18.0	224.0	76.0	8.2	53.0	17.0	29.0
10	10.0	218.0	446.0	47.0	13.0	15.0	116.0	68.0	8.2	39.0	17.0	102.0
11	9.6	139.0	264.0	42.0	12.0	14.0	72.0	127.0	8.2	30.0	17.0	382.0
12	9.4	103.0	166.0	40.0	12.0	14.0	51.0	79.0	8.0	24.0	17.0	183.0
13	9.2	79.0	116.0	34.0	11.0	22.0	40.0	49.0	7.7	21.0	18.0	117.0
14	9.0	63.0	88.0	30.0	11.0	62.0	30.0	40.0	7.4	19.0	19.0	95.0
15	9.0	54.0	71.0	27.0	11.0	35.0	22.0	143.0	7.1	16.0	18.0	124.0
16	9.2	47.0	60.0	38.0	11.0	58.0	19.0	339.0	7.4	15.0	16.0	97.0
17	9.4	43.0	54.0	100.0	10.0	50.0	16.0	233.0	35.0	14.0	15.0	76.0
18	11.0	48.0	48.0	85.0	10.0	36.0	14.0	109.0	58.0	13.0	15.0	62.0
19	12.0	35.0	348.0	137.0	13.0	453.0	13.0	64.0	26.0	12.0	15.0	55.0
20	89.0	31.0	342.0	107.0	500.0	370.0	12.0	44.0	79.0	12.0	15.0	49.0
21	439.0	28.0	196.0	78.0	445.0	141.0	11.0	35.0	294.0	11.0	17.0	43.0
22	227.0	26.0	131.0	63.0	120.0	77.0	12.0	27.0	141.0	10.0	16.0	125.0
23	134.0	43.0	93.0	62.0	62.0	51.0	22.0	22.0	76.0	10.0	15.0	134.0
24	88.0	95.0	84.0	49.0	41.0	36.0	159.0	19.0	50.0	9.7	15.0	98.0
25	67.0	74.0	102.0	37.0	688.0	28.0	67.0	16.0	38.0	9.7	15.0	78.0
26	53.0	59.0	79.0	30.0	750.0	23.0	43.0	14.0	31.0	9.7	14.0	644.0
27	44.0	49.0	63.0	25.0	255.0	19.0	28.0	13.0	24.0	10.0	14.0	558.0
28	36.0	42.0	53.0	23.0	111.0	17.0	24.0	12.0	20.0	10.0	14.0	256.0
29	31.0	46.0	21.0	68.0	15.0	270.0	12.0	17.0	9.7	14.0	163.0	0.0
30	29.0	39.0	20.0	47.0	14.0	197.0	11.0	16.0	9.7	14.0	120.0	0.0
31	26.0	35.0	0.0	36.0	0.0	97.0	10.0	0.0	9.4	0.0	97.0	0.0
MEAN	48.09	144.32	207.39	50.67	108.71	59.13	87.61	122.52	34.67	112.93	18.41	122.58
INCHES	0.973	2.637	4.195	0.992	2.199	1.157	1.772	2.478	0.679	2.284	0.360	2.479
STA AV	1.921	2.123	2.918	0.766	0.965	0.933	1.316	1.430	0.361	0.578	0.203	0.963

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0006525. Runoff data furnished by U.S. Geological Survey. Records are good to fair. STA AV based on 5 yr record period.

1969 SELECTED RUNOFF EVENT			AHOOSKIE, NORTH CAROLINA WATERSHED W-11							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date Mo-Day	Rainfall (inches)	Runoff (inches)	Date Mo-Day	Time of Day	Intensity (in/hr)	Acc. (inches)	Date Mo-Day	Time of Day	Rate (cfs)	Acc. (inches)
EVENT OF MAY 18 - 24, 1969										
RG WTD010			RG STD010							
5-19	0.0		5-19	900	0.0	0.0	5-18	2400	0.0	0.0
5-18		0.0		940	0.0450	0.03	5-19	1000	11.000	0.0015
				945	0.1200	0.04		1200	12.000	0.0021
				1130	0.0114	0.06		1400	12.000	0.0028
				1200	0.0400	0.08		1600	13.000	0.0035
WATERSHED CONDITIONS: Approximate land use 65% in woodland, 30% in row crops, 2% in pasture, 3% misc. (roads, homesites, and urban areas).				1230	0.0400	0.10		1800	32.000	0.0047
				1330	0.0300	0.13		2000	25.000	0.0062
				1340	0.1200	0.15		2200	32.000	0.0077
				1430	0.0120	0.16		2400	35.000	0.0095
				1445	0.0400	0.17	5-20	200	111.000	0.0135
				1455	0.1800	0.20		400	251.000	0.0233
				1505	0.0600	0.21		600	373.000	0.0403
				1515	0.0600	0.22		800	590.000	0.0665
				1530	0.2000	0.27		1000	670.000	0.1008
				1550	0.0900	0.30		1200	720.000	0.1386
				1555	0.7200	0.36		1400	738.000	0.1782
				1605	0.3000	0.41		1600	742.000	0.2184
				1615	0.1200	0.43		1800	738.000	0.2586
				1625	0.0600	0.44		2000	732.000	0.2986
				1630	0.2400	0.46		2200	720.000	0.3381
				1640	0.1200	0.48		2400	698.000	0.3766
				1650	0.3600	0.54	5-21	200	672.000	0.4138
				1700	0.3000	0.59		400	626.000	0.4491
				1710	0.3000	0.64		600	564.000	0.4815
				1725	0.0800	0.66		800	492.000	0.5102
				1735	0.1200	0.68		1000	428.000	0.5352
				1745	0.3000	0.73		1200	370.000	0.5569
				1755	0.0600	0.74		1400	319.000	0.5756
				1805	0.2400	0.78		1600	281.000	0.5919
				1825	0.3300	0.89		1800	247.000	0.6063
				1830	0.4799	0.93		2000	218.000	0.6189
				1840	0.3000	0.98		2200	194.000	0.6301
				1850	0.3000	1.03		2400	172.000	0.6400
				1855	0.4800	1.07	5-22	600	133.000	0.6649
				1900	0.8399	1.14		1200	108.000	0.6846
				1910	0.9601	1.30		1800	91.000	0.7008
				1930	0.4800	1.46		2400	76.000	0.7144
				1945	0.2800	1.53	5-23	1200	57.000	0.7361
				2010	0.1440	1.59		2400	46.000	0.7529
				2100	0.0240	1.61	5-24	1200	37.000	0.7664
				2200	0.0300	1.64		1800	35.000	0.7723
			5-20	2400	0.0050	1.65				
				100	0.0200	1.67				
				115	0.0800	1.69				
				215	0.0300	1.72				
				230	0.0400	1.73				
				240	0.0600	1.74				
				330	0.1440	1.86				
				350	0.3000	1.96				
				440	0.4200	2.31				
				505	0.1680	2.38				
				525	0.2700	2.47				
				535	0.3600	2.53				
				545	0.7800	2.66				
				555	0.6000	2.76				
				615	0.3000	2.86				
				705	0.1560	2.99				
				715	0.1200	3.01				
				730	0.0400	3.02				
				800	0.0200	3.03				
				815	0.0400	3.04				
				1550	0.0	3.04				
				1640	0.0240	3.06				
				1650	0.1200	3.08				
				1715	0.0480	3.10				
				1745	0.0600	3.13				
				1815	0.0400	3.15				

NOTES: To convert CFS to IN/HR, multiply by 0.00002719. Precipitation is Thiessen average of 10 rain gages.



EVENT OF MAY 18 - 24, 1969
ABOSKIE, NORTH CAROLINA WATERSHED W-A1

AHOOSKIE, NORTH CAROLINA WATERSHED W-12

LOCATION: Hertford, Bertie, and Northampton Counties, North Carolina; approximately 5 miles northwest of Aulander; Chowan River Basin.

AREA: 15360.00 acres 24.00 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)															AHOOSKIE, NORTH CAROLINA WATERSHED W-A2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
1969	P	2.14	3.28	4.61	2.22	6.48	4.02	8.32	3.94	5.29	3.65	2.03	4.45	50.43																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Q	0.823	2.233	3.451	0.966	3.013	1.296	1.149	1.904	0.500	2.376	0.322	1.941	19.974																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
STA AV	P	3.32	3.02	3.16	1.98	4.07	4.81	5.28	4.70	2.79	2.19	1.73	2.91	39.97																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Q	1.629	1.998	2.340	0.702	0.975	1.044	1.049	1.102	0.250	0.592	0.163	0.839	12.683																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval												2 Days		8 Days																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		Date		Date		Date		Date		Date		Date		Date		Date		Date		Date																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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		10- 5	0.080	10- 5	0.080	10- 5	0.170	10- 5	0.500	10- 5	0.970	10- 5	1.640	10- 4	2.370	10- 3	3.060																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</	

NOTES: Watershed conditions: Woodland, 75%; row crops, 22%; pasture, 2%; roads & homesites, 1%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 75.1-8. Records of precipitation and runoff began in 1964. STA AV computed on 1965-69 data. Precipitation Thiessen weighted using 5 gages. For temperature information, see table of maximum and minimum values included with data for Watershed 75.001. For long-time precipitation records, see U.S. Weather Bureau records at Scotland Neck, North Carolina.

1969 DAILY PRECIPITATION (inches)													AHOOSKIE, NORTH CAROLINA WATERSHED W-12												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec													
1	0.0	0.69	0.93	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.12	0.0													
2	0.0	1.32	0.68	0.0	0.0	0.06	0.0	0.0	0.10	3.46	1.18	0.0													
3	0.0	0.0	0.0	0.0	0.0	0.17	0.55	0.59	0.0	0.03	0.0	0.0													
4	0.0	0.0	0.0	0.08	0.0	0.0	0.0	1.01	0.0	0.0	0.0	0.0													
5	0.0	0.0	0.0	0.26	0.0	0.0	0.0	1.21	0.06	0.0	0.0	0.0													
6	0.0	0.03	0.67	0.46	0.0	0.0	1.58	0.0	0.0	0.0	0.0	0.0													
7	0.0	0.03	0.52	0.0	0.0	0.0	0.77	0.0	0.0	0.0	0.0	0.67													
8	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.78	0.0	0.17	0.0													
9	0.0	0.26	0.45	0.0	0.09	0.04	0.0	0.0	0.0	0.0	0.0	0.0													
10	0.0	0.02	0.0	0.07	0.0	0.0	0.0	0.41	0.0	0.0	0.0	1.40													
11	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
12	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.22	0.0													
13	0.0	0.0	0.0	0.0	0.0	1.02	0.0	0.08	0.0	0.0	0.0	0.0													
14	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.09	0.0	0.0	0.0	0.33													
15	0.0	0.0	0.0	0.0	0.0	0.37	0.0	0.32	0.0	0.0	0.0	0.0													
16	0.0	0.0	0.0	0.61	0.0	0.18	0.0	0.14	0.0	0.0	0.0	0.0													
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.97	0.0	0.0	0.0													
18	0.0	0.0	0.16	0.35	0.0	0.62	0.0	0.0	0.03	0.0	0.0	0.0													
19	0.59	0.0	1.00	0.19	2.13	1.12	0.0	0.0	0.0	0.0	0.31	0.0													
20	1.40	0.0	0.0	0.0	1.63	0.0	0.0	0.09	2.11	0.0	0.0	0.0													
21	0.15	0.0	0.0	0.0	0.0	0.0	0.92	0.0	0.15	0.0	0.0	0.73													
22	0.0	0.0	0.0	0.13	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0													
23	0.0	0.53	0.0	0.0	0.0	0.0	1.46	0.0	0.0	0.0	0.0	0.0													
24	0.0	0.0	0.20	0.0	0.0	0.04	0.12	0.0	0.0	0.0	0.0	0.34													
25	0.0	0.0	0.0	0.0	1.99	0.0	0.23	0.0	0.09	0.0	0.0	0.98													
26	0.0	0.0	0.0	0.0	0.64	0.0	0.06	0.0	0.0	0.09	0.0	0.0													
27	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	0.07	0.0	0.0													
28	0.0	0.0	0.0	0.0	0.0	0.0	0.86	0.0	0.0	0.0	0.03	0.0													
29	0.0		0.0	0.05	0.0	0.0	0.66	0.0	0.0	0.0	0.0	0.0													
30	0.0		0.0	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0													
31	0.0		0.0		0.0	0.0	0.02	0.0		0.0		0.0													
TOTAL	2.14	3.28	4.61	2.22	6.48	4.02	8.32	3.94	5.29	3.65	2.03	4.45													
STA AV	3.32	3.02	3.16	1.98	4.07	4.81	5.28	4.70	2.79	2.19	1.73	2.91													

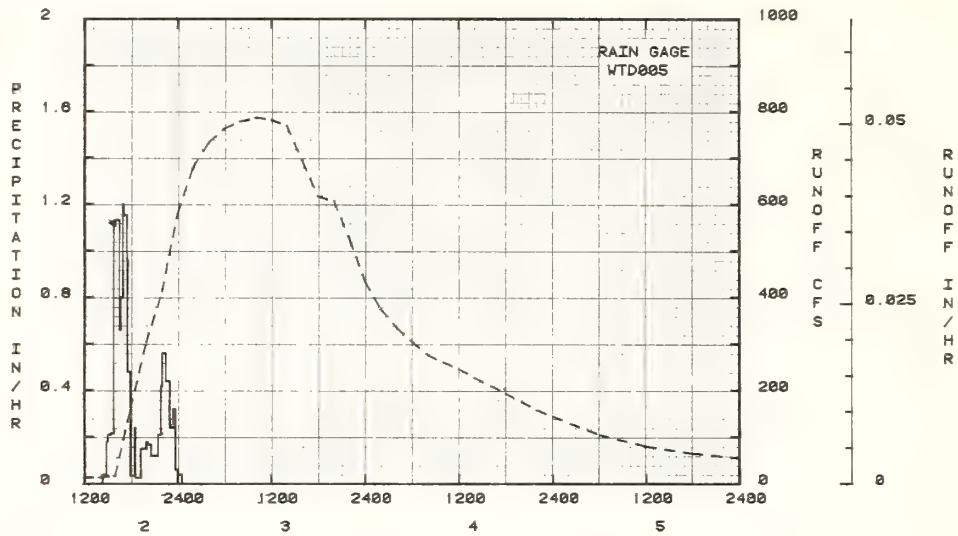
NOTES: Precipitation values are Thiessen weighted averages of 5 gages. STA AV based on 5 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) AHSOKIE, NORTH CAROLINA WATERSHED W-A2												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	9.60	37.00	35.00	11.00	6.20	19.00	4.00	17.00	2.70	8.60	8.30	3.00
2	6.70	299.00	200.00	9.60	5.20	17.00	5.40	14.00	2.40	99.00	14.00	3.20
3	4.90	196.00	153.00	9.40	4.60	18.00	8.20	26.00	2.30	701.00	11.00	3.00
4	4.40	102.00	106.00	8.70	4.00	15.00	13.00	127.00	2.20	252.00	9.20	3.20
5	3.50	68.00	70.00	8.70	3.70	14.00	8.80	389.00	2.10	89.00	8.60	3.00
6	3.10	32.00	56.00	38.00	3.40	12.00	26.00	293.00	2.10	50.00	8.50	2.90
7	3.10	45.00	271.00	42.00	3.20	11.00	106.00	89.00	2.00	36.00	8.80	3.20
8	2.70	38.00	138.00	30.00	2.90	10.00	87.00	39.00	2.50	30.00	8.60	5.80
9	2.80	118.00	120.00	23.00	2.90	9.80	35.00	22.00	2.30	26.00	8.30	4.40
10	2.60	78.00	133.00	18.00	3.10	9.60	18.00	18.00	2.10	22.00	8.10	57.00
11	2.40	55.00	82.00	17.00	2.40	8.90	12.00	35.00	2.00	19.00	7.60	100.00
12	2.20	45.00	57.00	14.00	2.40	9.80	8.90	19.00	2.00	17.00	8.00	57.00
13	2.10	34.00	45.00	12.00	2.30	15.00	7.30	13.00	1.90	16.00	8.30	44.00
14	2.00	27.00	35.00	10.00	2.30	27.00	5.20	12.00	1.80	15.00	7.60	42.00
15	2.00	23.00	28.00	9.40	2.20	28.00	4.00	17.00	1.70	14.00	7.10	49.00
16	2.10	21.00	24.00	17.00	2.20	38.00	3.50	16.00	2.00	13.00	6.60	41.00
17	2.20	19.00	21.00	37.00	2.10	23.00	3.20	11.00	4.80	12.00	6.30	35.00
18	2.30	16.00	20.00	38.00	2.00	22.00	3.00	9.20	7.40	11.00	6.40	32.00
19	3.40	14.00	156.00	52.00	31.00	208.00	2.80	8.00	3.20	9.80	6.60	30.00
20	79.00	12.00	108.00	47.00	427.00	131.00	2.70	7.10	37.00	9.70	7.80	28.00
21	139.00	11.00	70.00	34.00	180.00	66.00	2.60	6.60	89.00	8.60	6.80	27.00
22	72.00	10.00	51.00	28.00	74.00	36.00	17.00	6.20	41.00	7.60	5.80	60.00
23	47.00	21.00	38.00	28.00	42.00	24.00	19.00	5.10	24.00	7.10	5.10	51.00
24	33.00	35.00	40.00	21.00	42.00	16.00	62.00	4.80	17.00	7.10	4.50	42.00
25	25.00	28.00	45.00	16.00	581.00	15.00	19.00	4.40	14.00	7.10	4.10	36.00
26	19.00	23.00	33.00	12.00	255.00	10.00	14.00	4.10	12.00	7.30	3.60	218.00
27	14.00	19.00	26.00	9.80	98.00	8.40	11.00	3.80	11.00	8.00	3.20	102.00
28	12.00	15.00	21.00	8.00	61.00	6.20	12.00	3.40	10.00	8.50	3.20	58.00
29	10.00		18.00	7.60	42.00	5.20	134.00	3.00	9.20	7.60	3.00	44.00
30	9.00		15.00	7.00	30.00	3.70	61.00	3.00	8.80	7.10	2.80	36.00
31	8.30		12.00		24.00		26.00	2.80		7.40		32.00
MEAN	17.142	51.464	71.839	20.773	62.713	27.887	23.923	39.629	10.750	49.468	6.927	40.410
INCHES	0.823	2.233	3.451	0.966	3.013	1.296	1.149	1.904	0.500	2.376	0.322	1.941
STA AV	1.629	1.998	2.340	0.702	0.975	1.044	1.049	1.102	0.250	0.592	0.163	0.839

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0015496. Runoff data furnished by U.S. Geological Survey. Records are good. STA AV based on 5 yr record period.

1969			SELECTED RUNOFF EVENT										AHSOKIE, NORTH CAROLINA WATERSHED W-A2									
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF															
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.												
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)												
EVENT OF OCTOBER 2 - 5, 1969																						
RG WTD005			RG WTD005																			
10- 2	0.0	0.003	10- 2	1425	0.0	0.0	10- 2	1200	14.60	0.0												
				1455	0.0400	0.02		1400	14.60	0.0054												
				1505	0.1800	0.05		1600	16.70	0.0112												
				1525	0.2100	0.12		1800	162.00	0.0443												
				1550	0.2160	0.21		2000	303.80	0.1305												
WATERSHED CONDITIONS: Approximate land use 75% in woodland; 22% in row crops; 2% in pasture; 1% misc. (roads and homesites).				1635	1.1333	1.06		2200	413.00	0.2631												
				1645	0.6600	1.17		2400	581.00	0.4470												
				1700	0.8000	1.37	10- 3	200	681.00	0.6805												
				1705	1.2001	1.47		400	733.50	0.9422												
				1730	1.1520	1.95		600	763.50	1.2192												
				1740	0.9601	2.11		800	778.50	1.5045												
				1755	0.4800	2.23		1000	786.00	1.7940												
				1830	0.0343	2.25		1200	781.00	2.0839												
				1835	0.2400	2.27		1400	768.50	2.3706												
				1920	0.0267	2.29		1600	691.00	2.6406												
				1940	0.1500	2.34		1800	616.00	2.8824												
				2000	0.1500	2.39		2000	606.00	3.1085												
				2010	0.1800	2.42		2200	523.50	3.3175												
				2035	0.1680	2.49		2400	433.00	3.4945												
				2120	0.1200	2.58	10- 4	200	374.00	3.6438												
				2130	0.1200	2.60		400	335.00	3.7750												
				2150	0.2100	2.67		600	303.80	3.8932												
				2200	0.4200	2.74		800	276.00	4.0005												
				2230	0.5600	3.02		1000	260.60	4.0998												
				2300	0.4400	3.24		1200	245.00	4.1933												
				2325	0.2400	3.34		1400	227.60	4.2807												
				2340	0.3200	3.42		1600	192.80	4.4363												
				2400	0.0600	3.44		2000	174.80	4.5043												
			10- 3	30	0.0400	3.46		2200	157.50	4.5658												
								2400	143.00	4.6214												
							10- 5	500	104.00	4.7585												
								1200	79.40	4.8603												
								1800	64.20	4.9400												
								2400	54.20	5.0057												

NOTES: To convert CFS to IN/HR, multiply by 0.00006457. Precipitation is Thiessen average of 2 rain gages.



EVENT OF OCTOBER 2 - 5, 1969
AHOSKIE, NORTH CAROLINA WATERSHED W-12

ABOSKIE, NORTH CAROLINA WATERSHED W-A3

LOCATION: Northampton County, North Carolina, approximately 3 miles southeast of Rich Square; Chowan River Basin.

AREA: 2368.00 acres 3.70 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)														ABOSKIE, NORTH CAROLINA WATERSHED W-A3															
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual															
1969	P	2.19	3.33	4.65	2.06	7.31	4.63	7.90	4.18	5.54	3.35	2.19	4.47	51.80															
	Q	0.281	1.857	3.221	0.688	2.497	1.376	1.160	1.744	0.847	1.605	0.018	2.066	17.361															
STA AV	P	3.45	3.15	3.06	2.12	4.21	4.97	4.76	4.89	2.75	2.29	1.81	3.05	40.49															
	Q	1.069	1.483	1.734	0.526	0.866	0.517	0.483	0.717	0.217	0.355	0.031	0.698	8.697															
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS																													
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval				2 Days		8 Days															
		Date	Date	Date	Vol.	Date	Vol.	6 Hours		12 Hours		1 Day		2 Days		8 Days													
								Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.	Date	Vol.												
1969		1- 1	0.0	1- 1	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0												
MAXIMUMS FOR PERIOD OF RECORD																													
		10- 5	0.120	10- 5	0.120	10- 5	0.240	10- 5	0.670	10- 5	1.240	10- 5	1.880	10- 4	2.570	10- 4	3.490												
		1964		1964		1964		1964		1964		1964		1964		1964													

NOTES: Watershed conditions: Woodland, 88%; row crops, 10%; homesites, pastures, and roads, 2%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 75.1-6. Records of precipitation and runoff began in 1964. STA AV computed on 1965-69 data. Precipitation Thiessen weighted using 2 gages. For temperature information, see table of maximum and minimum values included with data for Watershed 75.001. For long-time precipitation records, see U.S. Weather Bureau records at Scotland Neck, North Carolina.

1969 DAILY PRECIPITATION (inches)														ABOSKIE, NORTH CAROLINA WATERSHED W-A3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

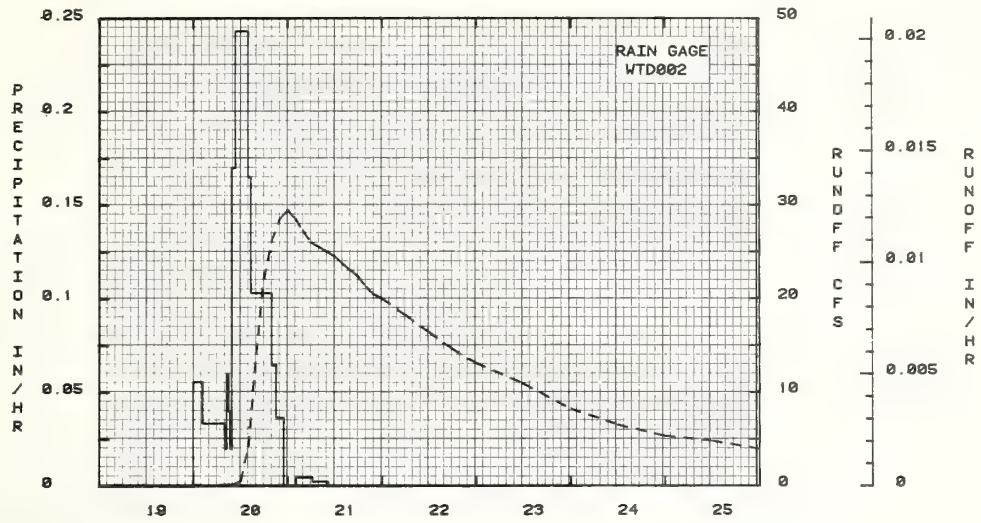
NOTES: Precipitation values are Thiessen weighted averages of 2 gages. STA AV based on 5 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) AHOSKIE, NORTH CAROLINA WATERSHED W-A3												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.440	2.600	4.400	0.520	0.150	1.200	0.050	1.600	0.010	0.070	0.020	0.070
2	0.080	24.000	24.000	0.520	0.080	0.700	0.060	0.700	0.010	17.000	0.250	0.070
3	0.070	21.000	24.000	0.600	0.070	0.700	0.080	0.520	0.020	76.000	0.090	0.080
4	0.070	13.000	18.000	0.520	0.060	0.240	0.340	7.000	0.010	29.000	0.060	0.070
5	0.040	9.000	13.000	0.990	0.050	0.090	0.070	58.000	0.0	15.000	0.050	0.060
6	0.030	6.700	9.800	6.300	0.040	0.070	0.390	3.300	0.0	9.100	0.040	0.060
7	0.030	5.000	31.000	6.700	0.040	0.060	11.000	15.000	0.0	5.000	0.040	0.110
8	0.030	3.700	22.000	4.200	0.030	0.040	16.000	8.600	0.040	3.500	0.040	0.700
9	0.030	14.000	19.000	3.000	0.040	0.040	8.100	4.400	0.060	2.000	0.040	0.700
10	0.030	13.000	20.000	2.500	0.040	0.040	2.900	3.200	0.020	1.300	0.040	8.400
11	0.030	9.000	14.000	2.300	0.030	0.040	1.400	60.000	0.010	0.680	0.040	13.000
12	0.030	7.700	9.800	1.800	0.030	0.030	0.890	2.600	0.010	0.370	0.040	7.900
13	0.030	6.100	8.100	1.400	0.030	2.300	0.440	1.300	0.010	0.180	0.050	6.100
14	0.030	4.700	6.500	1.400	0.030	4.800	0.110	1.900	0.010	0.110	0.050	5.700
15	0.030	4.000	5.200	1.400	0.030	8.100	0.070	1.300	0.010	0.050	0.050	7.000
16	0.030	3.800	4.200	2.200	0.030	9.600	0.050	1.500	0.010	0.040	0.050	5.700
17	0.030	3.300	3.100	3.700	0.030	4.700	0.050	0.930	2.000	0.030	0.040	4.500
18	0.040	3.000	2.800	3.300	0.030	3.500	0.050	0.570	2.000	0.030	0.040	3.700
19	0.090	2.500	17.300	4.200	5.700	36.000	0.040	0.360	0.350	0.020	0.050	3.300
20	3.200	2.000	16.000	4.600	52.000	31.000	0.040	0.230	9.100	0.020	0.070	3.000
21	6.000	1.600	10.000	3.300	24.000	16.000	0.040	0.190	25.000	0.020	0.070	2.800
22	3.700	1.300	8.100	3.000	10.000	8.100	5.000	0.090	17.000	0.020	0.060	9.000
23	2.900	3.500	5.200	2.600	4.900	4.200	1.000	0.040	11.000	0.020	0.060	9.000
24	2.300	5.500	5.700	2.200	9.800	2.000	12.000	0.020	6.400	0.020	0.060	6.600
25	2.100	4.700	5.800	1.700	78.000	1.400	0.890	0.020	4.700	0.020	0.060	5.700
26	1.700	3.900	4.300	1.300	30.000	0.990	0.240	0.020	3.200	0.020	0.060	39.000
27	1.400	3.300	3.000	0.900	16.000	0.520	0.240	0.020	1.800	0.020	0.060	24.000
28	1.100	2.900	2.200	0.600	8.300	0.240	0.700	0.020	0.930	0.020	0.060	15.000
29	0.890		1.800	0.440	4.400	0.090	32.000	0.020	0.400	0.010	0.060	10.000
30	0.800		1.400	0.240	2.700	0.060	16.000	0.020	0.180	0.010	0.070	7.900
31	0.730		1.100		1.800		5.200	0.020		0.020		6.300
MEAN	0.903	6.600	10.339	2.281	8.014	4.562	3.724	5.596	2.810	5.152	0.059	6.630
INCHES	0.281	1.857	3.221	0.688	2.497	1.376	1.160	1.744	0.847	1.605	0.018	2.066
STA AV	1.069	1.483	1.734	0.526	0.866	0.517	0.483	0.717	0.217	0.355	0.031	0.698

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0100514. Runoff data furnished by U.S. Geological Survey. Records are good to fair. STA AV based on 5 yr record period.

1969			AHOSKIE, NORTH CAROLINA WATERSHED W-A3							
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF			
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)
EVENT OF SEPTEMBER 19 - 25, 1969										
RG WTD002			RG WTD002							
9-19	0.0		9-19	2400	0.0	0.0	9-20	200	0.0	0.0
9-20		0.0	9-20	220	0.0557	0.13		800	0.200	0.0003
				800	0.0335	0.32		1000	0.200	0.0005
				830	0.0200	0.33		1200	0.600	0.0008
				900	0.0600	0.36		1400	4.300	0.0029
WATERSHED CONDITIONS:				915	0.0400	0.37		1600	14.200	0.0106
Approximate land use, 88% in				945	0.0200	0.38		1800	22.200	0.0258
woodland; 10% in row crops;				1045	0.1700	0.55		2000	26.200	0.0461
2% misc. (homesites, pasture,				1400	0.2431	1.34		2200	28.500	0.0690
and roads).				1440	0.1650	1.45		2400	29.500	0.0933
				2000	0.1031	2.00				
				2105	0.0646	2.07	9-21	200	28.500	0.1176
				2300	0.0365	2.14		400	27.200	0.1409
				2400	0.0	2.14		600	26.000	0.1632
			9-21	205	0.0	2.14		800	25.500	0.1848
								1000	25.000	0.2059
				615	0.0048	2.16		1200	24.500	0.2266
				1010	0.0026	2.17		1400	23.700	0.2468
								1600	23.000	0.2664
								1800	22.300	0.2854
								2000	21.200	0.3036
								2200	20.400	0.3210
								2400	20.000	0.3379
							9-22	600	18.200	0.3859
								1200	16.400	0.4294
								1800	14.600	0.4683
								2400	13.100	0.5031
							9-23	1200	10.900	0.5634
								2400	8.200	0.6114
							9-24	1200	6.500	0.6483
								2400	5.300	0.6780
							9-25	1200	4.800	0.7034
								2400	3.900	0.7253

NOTES: To convert CFS to IN/HR, multiply by 0.00041681. Precipitation is Thiessen average of 2 rain gages.



EVENT OF SEPTEMBER 19 - 25, 1969
AHOSKIE, NORTH CAROLINA WATERSHED W-A3

AHOSKIE, NORTH CAROLINA WATERSHED W-A4

LOCATION: Bertford County, North Carolina; approximately 2 miles southwest of Ahoskie; Chowan River Basin.

AREA: 1664.00 acres 2.60 sq. miles

MONTHLY PRECIPITATION AND RUNOFF (inches)							AHOSKIE, NORTH CAROLINA WATERSHED W-A4								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1969	P	2.48	3.64	4.69	3.40	4.30	5.34	8.26	6.30	4.95	6.65	1.57	5.35	56.93	
	Q	0.397	1.421	2.369	0.482	0.516	1.064	2.334	2.279	0.264	2.408	0.196	1.768	15.497	
STA AV	P	3.18	3.22	3.35	2.35	4.28	4.28	5.77	5.52	3.23	2.51	1.54	3.17	42.38	
	Q	0.457	1.239	1.176	0.204	0.445	0.374	0.671	1.445	0.191	0.518	0.075	0.551	7.347	
ANNUAL MAXIMUM DISCHARGE (in/hr) AND MAXIMUM VOLUMES OF RUNOFF (inches) FOR SELECTED TIME INTERVALS															
		Maximum Discharge		1 Hour		2 Hours		Maximum Volume for Selected Time Interval							
		Date	Rate	Date	Vol.	Date	Vol.	6 Hours	12 Hours	Date	1 Day	Date	2 Days	Date	8 Days
								Vol.	Vol.		Vol.		Vol.		Vol.
1969		1- 1	0.0	1- 1	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0	0- 0	0.0
MAXIMUMS FOR PERIOD OF RECORD															
		5-30	0.160	5-30	0.160	5-30	0.320	5-29	0.820	1-13	1.200	1-13	1.660	1-13	3.480
		1966		1966		1966		1966		1968		1968		1968	

NOTES: Watershed conditions: Woodland, 60%; row crops, 39%; homesites, pastures, and roads, 1%. For map of watershed, see Hydrologic Data for Experimental Agricultural Watersheds in the United States, 1965, USDA Misc. Pub. 1216, p. 75.1-8. Records of precipitation and runoff began in 1964. STA AV computed on 1965-69 data. Precipitation Thiessen weighted using 2 gages. For temperature information, see table of maximum and minimum values included for Watershed 75.001. For long-time precipitation records, see U.S. Weather Bureau records at Scotland Neck, North Carolina.

1969 DAILY PRECIPITATION (inches)													
AHOSKIE, NORTH CAROLINA WATERSHED W-A4													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	0.0	0.82	1.30	0.0	0.0	0.0	0.83	0.0	0.0	0.0	0.03	0.0	
2	0.0	1.35	0.36	0.0	0.0	0.17	0.02	0.0	0.23	5.34	1.54	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.15	1.05	0.96	0.0	0.18	0.0	0.0	
4	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.65	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.37	0.0	0.0	0.0	1.10	0.0	0.0	0.0	0.0	
6	0.0	0.01	0.70	0.55	0.0	0.0	1.45	0.0	0.0	0.0	0.0	0.0	
7	0.0	0.09	0.52	0.0	0.0	0.0	1.43	0.0	0.15	0.0	0.0	1.10	
8	0.0	0.42	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.17	0.0	0.0	
9	0.0	0.23	0.48	0.0	0.07	0.32	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0	0.05	0.0	0.63	0.0	0.0	0.0	1.02	0.0	0.0	0.0	1.55	
11	0.0	0.0	0.0	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.03	0.11	0.0	0.0	0.47	0.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.86	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.53	0.0	0.0	0.0	0.37	
15	0.0	0.0	0.0	0.0	0.0	0.32	0.0	1.34	0.0	0.0	0.0	0.0	
16	0.0	0.0	0.0	0.75	0.0	0.60	0.0	0.60	0.0	0.0	0.0	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.23	0.0	0.0	0.0	
18	0.0	0.0	0.15	0.31	0.0	0.77	0.0	0.0	0.35	0.0	0.0	0.0	
19	0.62	0.0	0.93	0.27	1.11	1.76	0.0	0.0	0.0	0.31	0.0	0.0	
20	1.37	0.0	0.0	0.0	1.62	0.0	0.0	0.10	2.54	0.0	0.0	0.0	
21	0.44	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0	0.80	
22	0.05	0.0	0.0	0.29	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	
23	0.0	0.67	0.0	0.0	0.0	0.0	0.57	0.0	0.0	0.0	0.0	0.0	
24	0.0	0.0	0.25	0.0	0.0	0.21	0.30	0.0	0.02	0.0	0.0	0.26	
25	0.0	0.0	0.0	0.0	1.46	0.0	0.14	0.0	0.30	0.0	0.0	1.27	
26	0.0	0.0	0.0	0.0	0.04	0.0	0.01	0.0	0.0	0.04	0.0	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.14	0.0	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.0	0.0	0.0	0.0	0.0	
29	0.0	0.0	0.0	0.04	0.0	0.0	0.97	0.0	0.0	0.0	0.0	0.0	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.0	0.0	0.0	
31	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	
TOTAL	2.48	3.64	4.69	3.40	4.30	5.34	8.26	6.30	4.95	6.65	1.57	5.35	
STA AV	3.18	3.22	3.35	2.35	4.28	4.28	5.77	5.52	3.23	2.51	1.54	3.17	

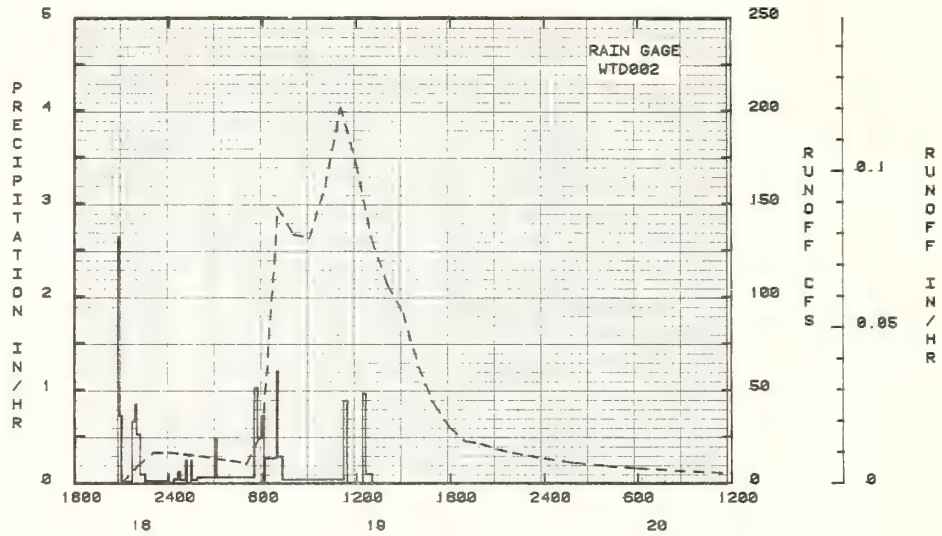
NOTES: Precipitation values are Thiessen weighted averages of 2 gages. STA AV based on 5 yr record period.

1969 MEAN DAILY DISCHARGE (cfs) AHSOKIE, NORTH CAROLINA WATERSHED W-A4												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.390	2.600	2.400	0.440	0.280	0.180	0.350	0.580	0.310	0.240	0.240	0.310
2	0.280	43.000	25.000	0.440	0.240	0.570	0.480	0.480	0.240	61.000	1.900	0.310
3	0.240	9.600	9.600	0.440	0.240	1.000	3.500	7.800	0.210	86.000	0.820	0.310
4	0.210	4.300	4.500	0.390	0.240	0.350	0.120	23.000	0.210	7.200	0.580	0.280
5	0.180	2.400	2.700	0.440	0.210	0.280	0.580	23.000	0.210	3.100	0.440	0.280
6	0.180	1.700	8.000	2.100	0.180	0.180	33.000	7.600	0.210	1.700	0.390	0.280
7	0.180	1.500	20.000	1.800	0.180	0.180	52.000	2.400	0.240	1.100	0.350	0.480
8	0.160	1.300	11.000	1.200	0.160	0.180	14.000	1.200	0.240	0.820	0.310	1.400
9	0.160	9.400	7.600	0.820	0.160	0.240	3.300	0.880	0.210	0.640	0.350	0.880
10	0.160	3.900	10.000	0.640	0.130	0.310	1.800	11.000	0.210	0.530	0.350	12.000
11	0.160	2.300	7.200	1.900	0.130	0.280	1.000	5.300	0.180	0.480	0.350	8.600
12	0.160	1.700	5.000	1.100	0.130	0.280	0.640	1.700	0.180	0.440	0.480	2.900
13	0.160	1.200	3.000	0.760	0.130	0.530	0.440	0.760	0.180	0.350	0.530	2.400
14	0.160	0.880	2.000	0.580	0.130	0.480	0.310	2.300	0.180	0.350	0.440	3.600
15	0.160	0.760	1.700	0.530	0.130	0.280	0.240	25.000	0.180	0.310	0.390	3.600
16	0.160	0.690	1.400	1.400	0.130	1.500	0.240	27.000	0.180	0.310	0.350	1.900
17	0.180	0.640	1.200	2.700	0.130	0.480	0.210	10.000	0.580	0.280	0.310	1.500
18	0.210	0.580	1.000	2.700	0.160	0.690	0.210	3.300	0.480	0.280	0.310	1.100
19	0.350	0.580	12.000	3.200	0.240	56.000	0.210	1.200	0.240	0.280	0.390	1.100
20	4.600	0.530	8.000	2.400	5.500	6.200	0.240	1.000	5.300	0.280	0.480	0.880
21	9.200	0.530	5.200	1.700	1.200	1.700	0.280	0.640	4.400	0.240	0.440	0.820
22	3.200	0.530	3.500	1.200	0.480	0.690	0.350	0.530	1.200	0.240	0.390	6.200
23	1.700	1.700	2.000	1.400	0.280	0.390	9.700	0.390	0.580	0.210	0.390	2.600
24	1.200	2.600	2.300	0.950	2.500	0.280	8.400	0.350	0.390	0.210	0.390	1.900
25	0.880	1.700	2.700	0.640	19.000	0.240	2.000	0.310	0.480	0.210	0.390	2.900
26	0.690	1.200	1.900	0.480	1.800	0.180	1.000	0.280	0.350	0.240	0.390	41.000
27	0.580	0.820	1.400	0.390	0.760	0.160	0.880	0.280	0.310	0.280	0.530	7.000
28	0.480	0.690	1.100	0.310	0.440	0.180	3.400	0.280	0.280	0.280	0.350	5.300
29	0.480		0.900	0.310	0.310	0.180	21.000	0.280	0.240	0.280	0.350	4.600
30	0.480		0.700	0.310	0.240	0.210	2.300	0.280	0.240	0.240	0.350	4.100
31	0.440		0.600		0.210		1.000	0.240		0.240		3.100
MEAN	0.8960	3.5470	5.3420	1.1220	1.1630	2.4800	5.2630	5.1390	0.6150	5.4310	0.4580	3.9880
INCHES	0.397	1.421	2.369	0.482	0.516	1.064	2.334	2.279	0.264	2.408	0.196	1.768
STA AV	0.457	1.239	1.176	0.204	0.445	0.374	0.671	1.445	0.191	0.518	0.075	0.551

NOTES: To convert mean daily discharge in CFS to IN/DAY, multiply by 0.0143039. Runoff data furnished by U.S. Geological Survey. Records are good. STA AV based on 5 yr record period.

1969 SELECTED RUNOFF EVENT AHSOKIE, NORTH CAROLINA WATERSHED W-A4												
ANTECEDENT CONDITIONS			RAINFALL				RUNOFF					
Date	Rainfall	Runoff	Date	Time	Intensity	Acc.	Date	Time	Rate	Acc.		
Mo-Day	(inches)	(inches)	Mo-Day	of Day	(in/hr)	(inches)	Mo-Day	of Day	(cfs)	(inches)		
EVENT OF JUNE 18 - 20, 1969												
RG WTD002			RG WTD002									
6-18	0.0	0.0	6-18	2045	0.0	0.0	6-18	2100	0.0	0.0		
				2050	2.6402	0.22		2200	9.000	0.0027		
				2100	0.7200	0.34		2300	16.300	0.0102		
				2140	0.0150	0.35		2400	16.300	0.0199		
				2150	0.6600	0.46	6-19	100	15.400	0.0293		
WATERSHED CONDITIONS:				2155	0.8401	0.53		200	14.200	0.0381		
Approximate land use, 60% in				2210	0.5200	0.66		300	13.000	0.0462		
woodland, 39% in row crops;				2230	0.0900	0.69		400	11.800	0.0536		
1% misc. (homesites, pastures,				2400	0.0200	0.72		500	10.300	0.0602		
and roads).			6-19	20	0.0	0.72		600	28.000	0.0716		
				35	0.0400	0.73		700	147.600	0.1239		
				45	0.1200	0.75		800	133.200	0.2076		
				105	0.0300	0.76		900	131.200	0.2864		
				110	0.2400	0.78		1000	159.200	0.3729		
				125	0.0	0.78		1100	202.000	0.4805		
				130	0.2400	0.80		1200	171.200	0.5917		
				150	0.0300	0.81		1300	130.000	0.6815		
				300	0.0600	0.88		1400	106.000	0.7518		
				305	0.4800	0.92		1500	90.800	0.8104		
				530	0.0621	1.07		1600	62.000	0.8559		
				540	1.0200	1.24		1700	41.800	0.8868		
				600	0.4800	1.40		1800	29.600	0.9081		
				605	0.7200	1.46		1900	22.300	0.9236		
				610	0.0	1.46		2000	20.800	0.9364		
				655	0.2667	1.66		2100	18.100	0.9480		
				700	1.2000	1.76		2200	16.000	0.9582		
				715	0.2800	1.83		2300	14.500	0.9673		
				1110	0.0332	1.96		2400	13.000	0.9755		
				1125	0.8800	2.18	6-20	200	10.600	0.9896		
				1225	0.0	2.18		400	9.000	1.0013		
				1235	0.9600	2.34		600	7.800	1.0113		
				1300	0.0960	2.38		1200	4.900	1.0340		
								1800	3.400	1.0488		
								2400	2.600	1.0595		

NOTES: To convert CFS to IN/HR, multiply by 0.00059599. Precipitation is Thiessen average of 2 rain gages.



EVENT OF JUNE 18 - 20, 1969
AHOSKIE, NORTH CAROLINA WATERSHED W-14

